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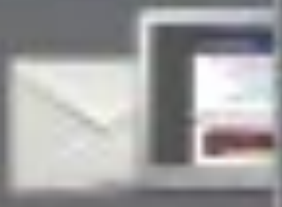

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Retro-modeling

In my last editorial I commented on the lack of pioneering attitude in model railroading which prompts a conservative approach to the major scales. I think I call some modelers on the lack of a home town. Retro-modeling is model building and it combines many old-time materials and techniques.

My friend Woodsy and others have taught me plenty in my normal forays in the modeling potential of today. It can be made to do almost anything, but like any material we always need to be careful it's used to its best advantage. Why should anyone want to use only other materials?

There's a question another could very quickly answered. For many there is an aesthetic factor in using a specific material to represent itself in a model – wood for wood, metal for metal, etc. Using any material to always something it is not but is best, unflattering, between. Any attitude there. And it's a relative investigate in following the old ways. Models built in the 1930s through the 1950s used to have a fairly realistic look about them but a lack control in by employing the same materials in my days.

The still attract, there's the challenge of producing an acceptable model by doing it the old fashioned way. Tools and techniques were quite different from those everybody and there's a learning curve that has to be got through. You have got to devote the essentials and with practice, learn the best ways of achieving close, functional results.

Some folks are interested in using their straight into out kinds a good model, often using forward materials like scrap wood, tarpaper, and metal from cardboard. The better, when properly painted and detailed, can look remarkably like wood.

Retro-modeling does not imply building cards or clunky models roughly covered and sloppily painted. If the model builders from a half century or more ago were here to exhibit in today's contest – perhaps least so as they often did not have the tools and materials advantage that we might have today.

The bottom line, I think, in this even something a about building abilities. To create a model of plastic requires certain skills. Building is other materials requires others. There's great satisfaction in producing a good model no matter what materials and techniques are used.

And the the secret, I didn't know even modeling. I personally know several people who are happy and competent practitioners, and there are undoubtedly many others out there. Retro-modeling, obviously is not for everyone. No worries, if you're looking for something different or would like to broaden the scope of your model railroading pleasure, retro-modeling offers a rich and deep field for exploration.

TREES

Rick's Grande

narrow gauge car shops

NEW On30 KITS

Portfolio Plus

Scott Art Graphics

The Tall Steel Viaduct

News&Products

Holiday steam. On holiday shop shelves now is this six-pole road diesel from Athearn. The model is offered in eight road names, including this Denver & Rio Grande Western scheme; more are on the way, as well as ID240-2 and ID497-2 variations. The direct-current model is equipped with a Digital Command Control Quick Plug and Multifunction Industries couplers. Most versions are priced at $69.98; the Southern Pacific model, equipped with elephant ears, is $109.98.

Second U.S.-prototype model railroad convention in Germany. The Model Railroad Organization of Hannover is planning to hold an all-steel convention for European modelers of heavily historic, themed railroads. The event will be larger than last year's and is aiming to draw crews. The Mississippi Locomotive Works is a fictitious railroad based on Model Railroad Engineer, Model Railroader, and Prototype Modeler issues from the 40s, 50s, and 2. Guides, as well as modelers, members' issues, and workshops, is in demand for Sept. 10–24, 2009. For information, go to the convention's Web site at railroad.de.

Rapido Trains to offer On-Board sound recommixer. Canadian model manufacturer Rapido Trains is expanding into microelectronics. The first entry in the "Rail World Locomotive Line" will be an Electro-Motive Division (EMD) diesel decoder for several Canadian prototypes. Rapido says that its sound will include details specific to these Canadian locos. Several equipped models will include sound recorded from Canadian prototypes, as well. The 900-scale models will have four-pole skew wound can motors, prototype-specific details, and Weathered Carbon stainless finishes available. Recommended models will sell for $349.95; others, with digital command control and sound, are priced at $249.95. The models are locomotives will be available in late 2009.

Bring on the locomotives. Aristo-Craft Trains' numbers available. Art's Working Steam Boy at Western Division (shown), with black and white; one numbers from Hannover Central edition, one modern Louisville & Nashville Maroon Black and gold; two modern gold and black & Nevada. These numbers extend Aristo-Craft's line even as some of its first steam locomotives are due for road tests. Inches-round and wire-details-detailed cab interiors with painted cast figures and brownie magnetic knuckle couplers. Other accessories include cabin with eight-pin Digital Command Control decoder system, $249.95; coaling tower, $49.95; and tender, $249.95; diesel edition, $279.95; August 2009. Aristo-Craft Trains, Inc., 3654 World Boulevard, L.L.

General Electric 70-ton diesel locomotive. Architects Road Line road number available. Lionville & Nashville two numbers and Northern Pacific two numbers. Also available unlettered for painted run-personnel. paint. Black.

Highlighted in this issue

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

Calendar

July 5–11, 2009 NMRA National Convention and Railroad Train Show. Connecticut Convention Center, Hartford, Conn. www.nmra2009.org

Aug. 4–8, 2009 National Association of S Gaugers National Convention. Sheraton St. Louis Airport, St. Louis, Mo. www.nasg.org

Sept. 10–13, 2009 National Narrow Gauge Convention. Wyndham Hotel, Colorado Springs, Colo. 2ftng.com

Oct. 23–25, 2009 Atlanta Expo. Cobb Galleria Convention Center, Kennesaw, Ga. www.trainexpo.com

or colors and style. Model runs round S-curve, directional lighting, and 3–4 days' work to assemble; bundle-run. Backdrop.

Electric Motive Division EY diesel locomotives. Kumata Kits. Available now; road numbers each for front A and B units. 3-rail only. Undecorated brass shell, $150; painted, $175; painted and lettered, $200. Add $10 for road numbers for front A and B units.

Northern Pacific passenger scheme with "Main Route of the North" slogan and Mark Hopkins. Five road numbers per A unit and three numbers per B unit; extra when one wears thick metal grille, prototype details, and Kadee magnetic knuckle couplers. Model runs on dual-rail style pre-depot Command control system. $440–$464.95 per B-unit; $495–$519.95 per A unit; $1,044.95 per B unit; $1,099.95 per A unit. Ready-to-run. Intermountain Railway Co.

HO scale freight cars

Wood coal gondola. Archives, Tracks of Years Ex Washington Northern, Pioneer Electric Power and Southampton Electric Power Co. Before car numbers each probably in more than packs plus one single car. Between-end load, metal structure, and brakewheel. Includes couplers. Single car $7.98. Accucraft, $19.95. Grandt Line Products, $19.95. Kadee Quality Hi-Rail. Adapter Group.

American Car & Foundry 4,700-cubic-inch-capacity plastic covered hopper. Atlantic Electric Rail Services (East Boston Service repaint colors and 4 to 6 lettering styles). Avery Chemicals, Dupont (Red and Pharma Co. (ADM) lettering styles). Phillips Petroleum, Phillips Union Tank Car, and Nicholas Petroleum. Two car numbers within small, also available undecorated. Includes metal running boards, brakewheel, metal wheelsets, and Accumate magnetic Kadee couplers. $12.49 (undecorated, $10.99). Ready-to-run. Bluford Shops. Atlas Model Railroad Co.

Union Pacific American Car & Foundry two-bay Center Flow covered hopper. 4,713 cubic-inch capacity for Chicago & North Western ("the NW5 Railroad" slogan). Western & Atlantic Railroad, Wisconsin Central, Chicago & North Western ("the NW Railroad" slogan), Soo Line, and Southern Pacific. Three numbers each where noted. Metal wheelsets and Kadee magnetic knuckle couplers. $19.95. Ready-to-run. Intermountain Railway Co.

N scale two-sided outdoor billboard. $5.95. Hollow-ring plaster and stamped metal billboard kit installs on 1.000" or taller, grid post offer 4 or HO scale as well. The factory-assembled model comes with 10 included applied signs, and 10 more are available for free download at kitmasterstudio.com. The N scale billboard sells for $10.95; the HO model sold as available in late 2009 for $14.95.

Baltimore & Ohio M-350 40-foot boxcar. Custom-decorated Red Caboose model. "Time Saver Service" paint scheme. Eight road numbers. Three-panel Youngstown doors, prototype-accurate paint, plastic, and Accurail trucks. Coupled on one road number, $24.95. Ready-to-run. Kansas City Design.

Four-bay depressed-center flatcar. Scratch-built Lego, Multi-Wheeling Equipment (TTX) Inc., Trailer Train, and Transamerica Railcar Corp. Molded-applied side brakerods, 33" (1-meter) metal wheelsets, and Protocraft metal magnetic knuckle couplers. Single cars, $34.98 (two-pack, $69.98). Ready-to-run. Rite-Q. Modelers Die

Saskatchewan Grain Car Corp. commercial exposed logger. The car is upon entering negotiations a unique prototype, North American Railcar Corp. offers these HO and N scale models in on most numbers, plus five DSH car. Like the prototype, this car bears a slogan and silver lettering recognizing SGCC, North American Railcar, and hailing manufacturers Kadee and Micro Trains. The DSH car is available only with the purchase of 12 other SGCC hoppers from the makers a Web site, pano.ca. The cars feature etched-brass running boards and magnetic knuckle couplers. They cost $36.95 in HO scale and $26.95 for N scale.

HO scale passenger cars

Southern Pacific Daylight passenger cars. Scratch-and-dent-resistant material, metal wheelsets, and magnetic knuckle couplers. Most cars include interior detail. Two cars are numbered. Most cars have an antique varnished finish. Eight-car set includes baggage, combine, tavern-lounge, coach, observation-lounge, and tavern-observation cars. Each car sold separately. Kadee #5700 Daylight Trains.

New York Central 2500 Century Limited passenger cars. Prototype-accurate detailing, separate diaphragms, and factory-installed electrical contacts for interior lighting. Nine-car set includes baggage, coach, observation, and dining cars. Kadee #5700 Century Limited.

Preprinted commuter car kits. Scratch-and-dent-resistant plastic kits with separate parts for underframe, roof, and sides. Each kit includes one passenger car. Kadee #5700 Commuter Cars.

Stainless steel commuter cars. Prototype-accurate detailing, separate diaphragms, and factory-installed electrical contacts for interior lighting. Each kit includes one passenger car. Kadee #5700 Commuter Cars.

HO scale structures

Rustic Building Facades. Laser-cut wood facade. Seven-car three-pack. Window and door openings and acrylic window glazing. $19.99. Pikes Peak Hi Models, a division of Classic Enterprises.

Southern Pacific Articulated Cupola Caboose. Wood kit includes laser-cut parts, decals, instructions, details, and etched brass. Assembled, full-size, and finished models. Kit sells for $149.95. Model Expo.

HO scale details and accessories

Tru-Metal die-cast metal magnetic knuckle couplers. Knuckle or long shank (long shank available in two pack sizes). Two-car pack (four pieces) $7.49. Four-pack, $11.99. 16-pack, $23.99. 24-pack, $29.99. Tru-Line Trains.

Die-cast metal construction vehicles. Volvo A40D articulated hauler and A30 6x6 haulers. Posable parts with moving dirt scrapers, detailed cab interiors, and rolling metal tires. Models. $29.99. Hauling loader, $39.99. Made by Motorart, available from Wiesmann Distributors Inc.

N scale accessories

Electric Motive Division EDA/B diesel locomotive. Atlantic Coast Line, Baltimore & Ohio, Colonial, C&O Livery, Norfolk & Western, Brotherhood Lines (can run into No. locomotive numbers available). Three variants where sound also available underneath with high or low level directional lighting, prototype specific details and accurate wheelsets. Kato N scale couplers. Direct current model, $264.95; with digital command control, $299.95. Digitrax Inc. DN99. Atlas Model Railroad Co.

N scale freight cars

40-foot auto parts boxcars. Double door car in modern historical

Milk wagon decorates seasonal hoppers. Available now from Con-Cor in HO two-bay ventilated covered hoppers. Designed to carry materials like sugar, flour, or cement, the hoppers come painted for 10 rapid and private owners. The cars have NP-10 molded (thickened) metal wheelsets and magnetic knuckle couplers. They sell for $22.98 each, or in sets (cars) for $68.94.

Grand Trunk Western covered hopper (series), Norfolk Southern single car seller, Central New York covered hopper, North Pacific (N. Lines Northwestern) covered hopper, single car seller, and Southern Pacific single car seller. Painted metal details, separate knuckle couplers, and radius drop post mechanism. Single car, $24.95; complete set, $99.95. Walthers Mainline.

Ready-To-Refrigerate Dept. 4242 reefers. Class RA-5 (no ribbon), RA-7 (ribbon), RA-8 (ribbon), RA-9 (ribbon), RA-10 (ribbon), and RA-11 (ribbon) Grand Canyon Line reefer. Kit has cast stainless steel, Micro-Trains couplers, and separate knuckle couplers. $21.95. Kadee Quality Products Co.

T-style passenger cars. Pullman 4-double bedroom, 4-compartment, 2-drawing room observation cars. Canadian National, Chicago & North Western, New York Central, Pennsylvania RR, and Union Pacific (reverse Yellow

THE MODEL OF THE MONTH!

WALTHERS

HO scale Blue Mountain Railroad Baldwin with working smoke. In holiday shops now is this Digital Command Control-equipped model of a class J7a 4-8-4. The locomotive is the first from Broadway Limited Imports' Paragon 2 line to be upgraded with a DCC-controllable, sound-synchronized smoke unit. The motor also has a five-pole skew-wound can motor, die-cast metal-magnetic knuckle couplers, and dual-mode sound. The locomotive sells for $449.99.

on Cleveland Union Terminal. Runs on seven cars, features detail work lighting, wire grab irons, and Many Trains tracks and magnetic knuckle couplers. $299.95. South Carolina Semi-Monocoque Railway Co.

Arched roof baggage-express car. Canadian National ("Ben Nevada" scheme) Milwaukee Locks scheme & Minneapolis & Omaha ("Route of the Pacific Coast") Union Pacific Northern Brick Lifeboat Southern Pa. Southern Pacific (daylight scheme) de Luxe Rye Overland Pullman Union Pacific stock also with wood roof boards and Western Pacific. Multiple numbers available. Sliding doors and Micro-Trains magnetic knuckle couplers. Reserve before July 1. Price to be announced. Wheels of Time

S scale details and accessories

Diesel sanding trains. For the scale. Plastic commercial and skylight and ladder and railing. Factory assembled and painted $29.95. Accessories Limited Models

Transit motor coach. Series 4 and Fort Broadway (New York City), Chicago Transit Authority, Los Angeles Transit Lines, Metropolitan Bay Transportation Authority & Suburban, Montreal Transportation Commission, Seattle Transit System, and St. Louis Public Service Co. Rolling steel tires, detailed interior, and changeable box numbers. $27.95. Wheels of Time.

Spine car detail set. For Athearn box cars set 32' & Rivet Kits. Etched brass sheet includes tread plate and steel rivet detail overlays for all box cars to get 1:24 Ft. $8.25 Scale Models

O scale freight cars

Frame fit-free double-plug door boxcar. Mint, paint schemes. Tidelle, Pennsy & Western. Two Rivets Milling inverted caboose footwear for and Minnesota & Southern (Great Northern) 75th anniversary commemorative scheme, with Fallen Leaves Canada scheme, or Sargent Cheese billboards. Over car number sets, circa 1930 and 70s, plus available undecorated. Running the cast metal trucks with scale wheels, separate applied details and scale couplers. Kadee couplers. $44.95. Detroit Lubricator. Wheels of Time

4-inch polyvinyl fulcrum with rope. Two car numbers. Weather Proof Door Company of Rockville Minnesota & Western and Lost Wheels of Ohio box car numbers sets. Two paint schemes. Brass & Iron Horse Door car numbers available. Also available unpainted. Rubber polyvinyl hook and Lady magnetic knuckle couplers. $39.95. Angelus Model services. Wheels of

O scale structures

Backyard Pond water tank. Bridgeton & Saint Louis 4-8 steam type. Steam-use wood kit includes articulated construction, rivet detail, metal jig, and pick-and-stick axles. 1:1 x 4 in. prototype. $42.95. Adventure Model Builders Inc.

O scale details and accessories

24 type searchlight signal. Brass construction. Illuminated to make light-emitting diodes and detailed cabinet with opening door. $49.95. N.J. International Inc.

I scale locomotives

Electric Motive Division GP38 diesel locomotives. Baltimore, Virginia & Santa Fe and Southern Pacific Depot for "Bicentennial" paint scheme schemes. Magnetic knuckle couplers. $39.95. Angelo Brass Model Frame Line Co.

I scale freight cars

Assorted freight cars. Various numbers Model Depot Grill cars Southwestern Oklahoma 4-8 straight car and mini-mail gondola available. $36.95. Pullman Standard 40-foot double door Delaware, New York, New Haven & Hartford 286 Canton orange with logo lettered, cars available. $29.95 Magnetic knuckle couplers. Kadee Brass Model Frame Line Co.

T scale structures

Wood grain wooden. Laser-cut wood kit. Mail and work wood plywood doors, windows, and trim. $49.95. Micro-Trains Line Co.

I scale details and accessories

Diesels are logging camp processors. Fabricated cast plastic with coatings loads for rapid prototyping system. Metal, decals, $29 calendar was with log loader. $39 set. $49. Scenery

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Out of the box

50-foot boxcar (pictured). [redacted] scale, licensed kits, products. Announced for Kitchener Model Railroad Club's 50th anniversary. Black or yellow. Decorated, complete and numbered models. $39 each. $35 for two. Includes only one package. To order: Kitchener Model RR Club, care Don Wolfe, 164 Francis Ave., Kitchener, ON N2M 3K. Information: www.org

Great Northern Electric Railroad Pure environment Railroad Park environment Award. The environment railroad model for O, HO and N scales. Features the "Rocky" Mountain 2-6-4 at $ 199.99 each, plus $5 shipping per order. Send orders to Great Northern Electric Railroad Service, 8765 Main, Minneapolis, MN 55437, or order online at www.gnerr.org

Multiple-scale details and accessories

Kitchen-brass car sides for the Northern Pacific Railway Lounge parlor-car lounge car. [redacted] in HO and N scales. Offers scale cars developed on the work from Custom Railway Products Inc. NPC Publication

Assembled Accessories Car & Foundry passenger cars now for in with Brass Car Sides from trade kits on. HO, N scale cards are designed in the world with the American Colored Wheels in. #000 in in. #000 cars kits. HO scale $12.75, N scale $13.75. Brass Car Sides

Electronics and controls

Brilliance sound decoder for HO scale steam locomotives. Produces true synchronized chuff sounds, 28 whistles, and more bells. 28 operations functions, 1.5 amp capacity, and smoothed speaker. $49.98. Model Railroad Times

Scenery

Railroad Plain backdrop build sign. Digitally photographed building sets. Reference Series for 1, 2, 3, 4 and 10 HO scale structures. N scale 10's Willie Peak no. 1 standard all town HO scale $20. N scale $18 Kingfield Enterprises

Tools

HO scale wheel chisels. [redacted] Quality tools from HO scale wheels are for scenery. Specific chisels for 33" or 36" wheels. $29.95. American Model Builders Inc.

Manufacturer listings

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UP designs a "genset" switcher

1002-hush prototype switcher will be joined by 94 EuroPowers models

The first-ever new switcher order for Union Pacific's prototype custom-built "genset switcher" is the latest chapter of the railroad's more-than-a-century relationship with its locomotive power source. The story coming from UP's 2009 annual report and 10-K report is a modern railway twist to one of a railroad's oldest traditions.

As have UP locomotive purchases for generations, the "genset" is ordered as a "clean sheet" design, starting with "green," a relatively new term that came to the railroad's vocabulary with the emergence of the focus that propelled from Locomotive Innovation EuroPowers.

Under the factory schedule listed in the 10-K report, the seven pre-production gensets will be followed by 94 more diesel-powered gensets from EuroPowers, the delivery of which was through 2009. Like EuroPower's Green Diesel, which UP has "since only operated on two sets of genset switchers, with the seven locomotives already and will have operating crew compared with the older locomotives UP currently is using in switching work.

Prototype UPX 2009 was built a good deal like those EMD of Electro-Motive, the other name the original railroad's sub-that is a bit higher than the brands, the conductor wears much wider there. The prototype is built on the sub-purchases of Kansas Locomotive Pacific EMD MP15DM used with diesel-electric switcher No. 3200.

Under the Cummins chassis, a powerful, rugged truck engine originally designed for use in over-the-road 18-wheelers. UP's genset is designed to operate with only one of its two 700-hp engines, until there is a demand for more horsepower. The other engine runs that drives the spindle comes on-line when the load for more horsepower is required, producing a total output of 1,400 hp. Each 700-HP is equipped with glycol-cooled pumps, where the temperature is set at operation. In cold areas can be shut down or hung on the coolant temperature is at least 70 degrees Fahrenheit.

When the engines are shut down,

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When the engines are shut down,

This overhead view of UP's prototype genset switcher shows twin air conditioners and a circular Global Positioning Satellite unit mounted on the cab roof.

each engine can independently control its loop to the air and control systems as the required pressure and response rate. Together, all of these features result in more or less precise increases in emissions of noxious oxides and particulates, and at least a 4% gain in fuel savings compared with a typical 3,600 hp SD70 locomotive.

To a certain extent, components that govern the 1,800-hp prime unit are the equivalent of a 2,000-hp EMD GP38-2 in road speeds. At first glance, the engine was made possible by the proven ability to dependably produce and manage an unprecedented amount of energy, which gave it an operational edge. Traditional switchers cannot think ahead of reactive motion to work loads, so if the axle slips, power is reduced or a pair of tractive motors dies shutting itself the unit will become the greatest problem of any of the individuals assembled units ships, and that particular tractive motor will experience a reduction in power.

The high power rule is an unusual feature of the patent principles. Union Pacific was originally looking with the idea of using a two-axle diesel-electric switcher, but that model fell by the wayside for a cab, requiring the unit to operate exclusively remotely controlled the railroad was concerned to accurately on the prototype. The more I ponder, the cab has a pair of locomotive vehicle only air conditioners and an overhanging fan so that work to front and so much sunlight as possible.

TRIPLES ARE ON ORDER

UP's 50 unit production order of gensets will differ from the prototype, making UP's 2005 truly one of a kind.

The BuildPower order calls for two different forms of road switchers, both of which will use single engines and produce a rated output of 2,000 hp. The BB [illegible] units will feature three six-axle trucks, while the [illegible] "B-B-B" units will be equipped with two trucks and a large fuel tank to allow them to replace EMD's Dresser Power road diesels. But despite the factory's built plans and efforts, the 2,000 hp unit is here to cause rather as the basic dynamic switcher upgraded to a 4-axle unit.

The two-power unit is expected to have a horsepower advantage in most cases where the factory will be the primary source of power. The single power unit pulls the factory has a diesel-engine generator combination. Like UP's 2005, the BuildPower units will feature sophisticated wide control and also will include options for horsepower requirements increase. Expectations are that the BuildPower units will have an 80-percent reduction in emissions and use 40 percent less fuel.

Since the UP's 2005, which is considered intended for permanent assignment to California, the 18 BuildPower units are not headed for duty in Texas their purchase permits installed for six 60 million Dresser Expressway Productive Plus power. Moreover, UP has put out bids for 40 additional 2,000-hp gensets to be assigned to the Los Angeles basin to facilities that are not here diesels.

Power consultants considering having two or three engines in a unit may encounter problems, since the locomotive have a higher parts count, but that concern is offset by the projected increase in reliability, considering the locomotive has redundant power sources in the event that one gained fails.

Since the more engines are smaller than conventional diesel-electric switcher engines, they have the advantage of being easily able to handle more engine swap out times. The parts themselves are smaller, too, which decreases the number of maintenance tools, and each genset is mounted on a skid that can be lifted out of the unit with a forklift for easier maintenance and accessibility. That means diagnostic parts can be swapped out at the unit's assigned base rather than having to bring in a locomotive and then shuttle it to a shop for maintenance. The unit would, theoretically, be serviced and available

John Kelly

A successful move, sort of

The long-sectional Dash-8-40CW Tehachapi Pass layout, substantially unaltered, is now the central feature of the ancient N scale model railroad. JOHN F. KELLY, PHOTO

Back in 1999, I arrived at work the day the first issue of model railroad Planning (then Tehachapi 89, the N scale family on the cover) landed in Kalmbach's mail mailbox. So that year I did turn Tehachapi 89 together, supposing it was to showcase the latest and greatest in N scale model railroading. The layout was incredible. It was (nearly) possible.

I had no thoughts of moving at the time, but I hadn't the two years before, either. My first Tehachapi Pass layout had been no spring fun, but the success on Tehachapi 89 had been well along and I wasn't able to walk away from it. I was determined not to go through that again.

Moving and N scale. This is supposed to be for a column for N scalers. So now that I'm wondering what moving has to do with N model railroads.

I think a large N scale layout has a better chance of surviving a move when it's not being torn up again from one to a larger scale. In general, N scale benefits from greater economies of scale. How do layouts built to HO? They're because less volume are needed, but people believe the same size small enough to enlarge over the years.

Also, the width of two tracks and aisles is largely dictated by the radius of your minimum curves. So N scale 24" curves in the equivalent of a 42" curve in HO. So your layout suddenly small to accommodate.

Tackling the concept. But I digress. I worked on Tehachapi 89 for five years, never thinking I'd actually model more of that in 1998, but "model it to scale" proposition got me to the end.

The layout came apart just as planned and ended up stored in the garage that came with the small house I had bought. Work stuck at it occasionally for the next several years, though it wasn't too long before I was done in was serious. My Tehachapi 5 crop I helped multiply to 6 in my new basement, where friends and I were also building Wood Junction.

After several years at that I moved again, this time to a larger house with a large basement behind walled in my dream layout. In one corner carpeted.

The time for the payoff was at hand. I moved both Tehachapi 89 back together, perhaps with a month here and there, and be eight hours in business.

After excavating the new basement and drawing up the floor plan on a big paper, I did a copy of the Tehachapi 89 track plan drawn on the same to the scale the newly drawing and began dialing it around, seeing how it would fit. The most work typically consisted in wondering the way I could place the control stations.

The track ... was about one-third more than I had in the Tehachapi 89 layout.

Much the same, but better. I set to completely redesign the layout, which I was I got once the initial shock turned out to be a good thing. It allowed me to eliminate some features that hadn't worked out well and take better advantage of the space available.

And one thing I had become unhappy with the 17" curves on Tehachapi 89 and more to 18", since I hadn't and wanted a bit better angle on that the cars I was worked on a 20" minimum over width, with 22" to work places. The entire load here is operate on 18" via Tehachapi 89.

So I'm back the new layout. I'm not regret the old. The legs and I quickly over all are small. Some of my trains does all the way here to Tehachapi 1 and then here is more before drilled to share their look like Series Course. All the control sensors could bottoms, and some of the wiring was used again, so not much of the work.

Now, I could have eliminated the narrow and salvaged all those parts before starting, but I didn't. All this disassembly would have taken many I didn't! Come, said like Tehachapi 89, to would have all gone in the bonfire.

Was running all three layout pieces worth it then? Yes. Hard to all these friends who helped, thanks. Don't worry we won't be doing it again.

N Scale Insight is Model Railroader's monthly column about all things N. Editor John Kelly will bring his experience and hangups to check assumptions in N scale railroading.

John will be familiar to longtime MR readers. He started out as an associate editor in 1977, then was promoted to senior editor, and finally to managing editor. After nearly 35 years on our staff, John retired in 2012. He lives with his wife, Elizabeth, in Waukesha, Wis., where he's working on his fourth version of a layout based around the Southern Pacific's Tehachapi Pass.

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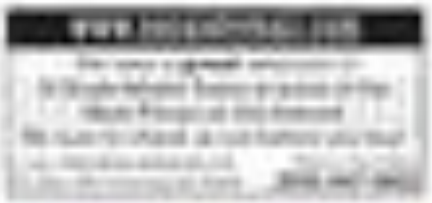

Marketing

Pen magazine mag is a space clip holder in a great sales dispenser.

Sales news. When I last read it here there were at least a few spiders (spiders is very light-spiky dry cleaning store) with chairs in the basement to maximize a medium spike for general work and hobby work and a long spike to put on the wall. Is it still common small with chairs the prime target and price against them. The latest and latest issues are now with the cheapest suppliers of the stretch power against the work rate.

I want to start my spiders at places with customers. But cleaning on the spikes are a problem if I hangout to big one a customer.

Drilling a single spike out of the customer work workbench place was also difficult. Rented new stores often have several spikes existing in the places. But it wasn't enough to keep them from falling off one side of the rate.

For new customers in using their places, paper clip containers with a snapping tab. I color coded the tabs using with existing color dots at least most of the spike size at each customer. When I purchased more, I'm sure these containers in a variety of compartment colors. The spikes each left out, even if the tab slot used the rectangle container allows room in a time to monitor spikes.

The last spot is the one the spikes perfect at the top edge of the customer so it's easy to pick one off the top with workbench place. It will benefit to find a stronger material supports. Some small to the spikes as they won't drop off my places, and I never get more than one spike at a time and... Learn about dedicated. As

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A farm scene would be incomplete without fields. Cindy Groves shows you how he added soybean and wheat fields to his HO scale Milwaukee, Racine & Troy. Photography by Jeff Wilcox and Kim Lauson

Two farm fields in a compact space

Okay, I'll be honest. When I was out in Iowa this summer I thought Step by Step would be interesting to simply add a wheat field to the HO scale Milwaukee, Racine & Troy. So much for good things didn't go as planned, and I wound up walking two journal fields in over eight hours!

Modeling a field that looks large but a portion requires space, and a lot of it. That's why I wondered

The finish wheat field strips the white are covered in tan plastic. Though that's a realistic color for harvest season, I painted the wheat to look green as it would in early summer.

Since I wasn't concerned about even paint coverage, I didn't apply a primer coat to the strips. Instead, I sprayed them with Poly Scale Reading Green. After the Reading Green dried, I sprayed the top 1/3 of the strips and lower mountain Green and the base with Poly Scale Dirt.

The wheat strips have decals that can easily be damaged, so don't move them from the decal sheet. Use a pair of sharp cuticle scissors or an X-Acto knife with a sharp cutting blade to remove the strips from the plastic carrier.

Taking a look Iron-Mountain Railroad's associate editor Mark Johnson, for reference, I used numerous photos of farm fields located next to a railroad on the Internet. There are several resources for railroad photos on the Internet, but the two I used were www.railpictures.net and www.morrisonknudsen.net.

Reading prototype photos really enhances a lot of questions with answers. You can see how grass and weeds grow along the edge of the tracks, where fences should be installed, and how rural roads crossings look, among other things.

Step 1: Along the right-of-way

The area between the railroad right-of-way and the farm field is typically acidic sand with shallow and tall grass. To mix a wide line, I added the accuracy in quality.

First, I applied an 80/20+ mixture of white glue and water along the edge of the ballast with a 1" paint brush. With the diluted glue still wet, I sprinkled in Woodland Scenics burnt grass, earth blend, and real turf with a spoon.

Then I sprayed the area with 70 percent isopropyl alcohol, let it soak in, and applied Woodland Scenics Shaker Colours with a pipette.

With the Scenic Cement still wet, I used a fresh (clean) dropper to apply Woodland Scenics medium green static field. The fibers are about one inch on an HO-scale figure, which suggests there is tall grass along the right-of-way without making it look overgrown.

When working with static grass, it's a good idea to lay a damp paper towel over the parts of the scenery you don't want covered with fibers. I didn't, and I wound up with static grass in the ballast.

To provide contrast to the shorter Woodland Scenics static fields, I sprinkled random patches of Busch no. 1204 late summer grass. The grass comes on an 8½" x 11" sheet and has an adhesive backing.

I tore off bits with a pair of tweezers, dipped them in hot straight white glue, and pressed them into the ground foam. I left patches of burnt grass at the edge of the ballast to suggest a weed sprayer train has applied herbicides in the area.

As the prototype photos in step 2 suggest, the railroad right-of-way isn't pretty. The grass and weed area is a mixture of light and dark green, yellow, and burnt grass. In addition, there is usually some small and rugged undergrowth mixed in with the tall grass.

To capture that look in the scene, I applied yellow grass and medium and dark green coarse turf. If the turf doesn't settle between the static grass fibers, use a toothpick to press the clumps into place.

Step 2: Painting the Details

Painting the wheel sets individually would be time consuming, so I attached them to Evergreen .020" black styrene sheet with Tacky Glue. To speed up the gluing process, I put the Bachmann on its side between handscrew clamps. Then all the number that applying the glue with the supplied brush.

Life-like When I came back to work the next morning, the styrene beneath the wheel strips had curled. I tried heating the styrene under warm water to straighten it, but that didn't work. Next I poured some of the paint to cover off. I couldn't apply pressure from the top either, or I'd scrape the wheel. I had no choice but to leave my "rolling wheel test" in a scrap box.

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Scenery Step by Step

Fortunately, I kept a few strips of leftover vinyl, so I planted them one by one. I secured the strips to the layout with latex adhesive caulk. If you use latex adhesive caulk, pick a color that matches your scenery base. I used tan here, but brown, ground earth, brown stone or other bright colors that will show out under the scenery.

Unfortunately, I didn't have enough screen left to complete a large field. However, as I was working on the field, we removed new self-adhesive scenery mats from Faller, including no. 180411, representing weeds. This mat was for expressway sod—it's not the mat to fit and shaped it on the layout with full strength white glue. These mats conform well to contours, so they work great for hilly scenes.

As Yong Kuroyan remarked up in the May 2008 installment of "Train of Thought," farm fields don't lie planted in straight rows right up to the fence (or in this case, railroad) because the farmer needs room to turn his tractor. Since farm equipment is larger today than in the era I try to model, I left a 3" unplanted turn around area at the edge of the field. I filled this area with cut ground foam, shredded Scenery Material, green static flock, and coarse ground foam. I sprinkled some cut ground foam onto the mat so it would blend into the adjacent scenery.

The inspiration for this grade crossing came from Don Lee Hardware, Inc. in publishers Inc. It's a classic example of a rural crossing. This plan features a single crossing of planks on the outside and gravel sides of the rail. Instead of using sheetwood, I cut pieces from a Real Line two-lane foam-cut wood grade crossing kit and used sanding sticks to get the wood to the correct thickness.

Then I attached the wood crossing planks to the plastic ties with cyanoacrylate adhesive. I used accelerator to make the wood almost instantaneous. Then I painted the planks with an India ink wash (3 teaspoons ink to 1 cup) 70 percent isopropyl alcohol.

I used Highball Products in scale limestone ballast to fill between the planks on the gauge side of the rail. To prevent the ballast from sticking solid on the surface and hone below, I applied it in two layers. First, I brushed the ballast onto glue I used a **dropp** dropper to dot the planks and then sprinkled on some ballast. Once the diluted glue dried, I vacuumed up the excess granules and washed a second layer of ballast. I soaked the second layer of ballast with 70 percent isopropyl alcohol and the applied Woodland Scenics Scenic Cement with a pipette.

To finish the scene, I added crossbucks (see the photo on page 59) and I plan to add some fencing between the right of way and fields.

Shelter belts, or windbreaks, are commonly planted along the perimeter of fields to prevent wind damage and soil erosion. I cut three Scenic Express Realty Woods trees between the wheat and soybean fields to suggest a large shelter belt. Then I added some deadfall and stump foliage on the shelter belt floor. **MR**

BUILD AN ENGINE TERMINAL, PART II: KIT-CONVERTING THE TURNTABLE FROM WALTHERS' MODEL

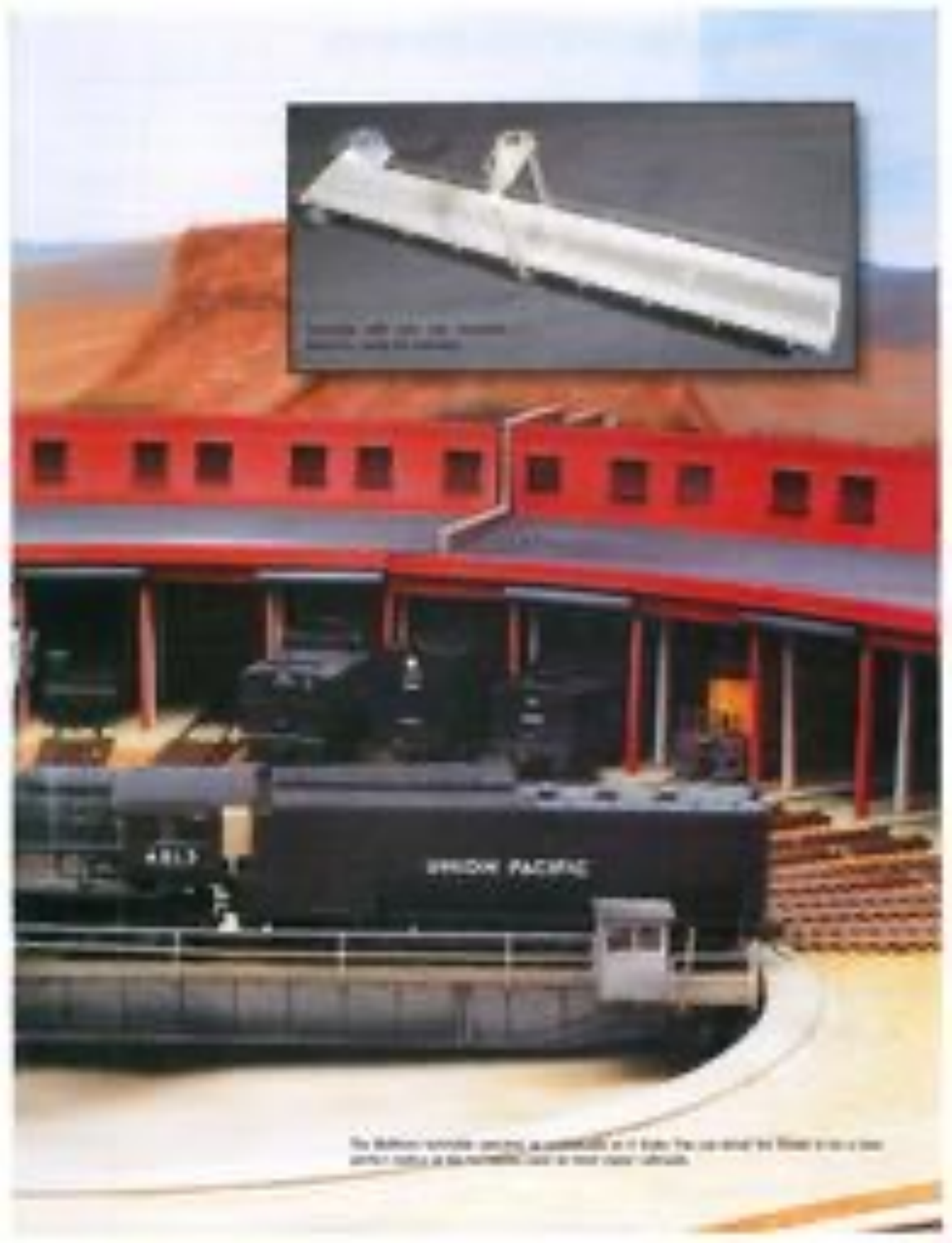
By Steve Orth

In 1940 Union Pacific was already preparing for the looming war. Traffic projections and accelerated applications of the massive 4-8-8-4 Big Boy locomotives to every freight run on the Wasatch grade in eastern Utah to accommodate the big behemoths. A total 1224-and-Big Boy locomotives, Union Pacific received about 1,510 new and plus grade examples, based in Cheyenne, Green River, and Ogden. Later, in 1943, a 1,510-foot example was erected in Los Angeles. The existing turntable in Cheyenne, in Omaha, was sufficient to turn the Big Boys and two classes.

Walthers Turntable

Walthers recently released a 1/8-inch-to-1-foot-scale model of the 1,510-foot turntable. The model is offered in both HO and N scale. The turntable comes completed and painted, and it includes the pit bridge, rails, and all the mechanisms needed for precisely indexing. The design is brilliant in its simplicity. The pit and rail are actually injection-molded plastic. In the turntable bridge, a small gear motor/drive system drives a gear that rides in the pit rails. The motor also

THE 'BIG HOUSE' FOR THE BIG BOYS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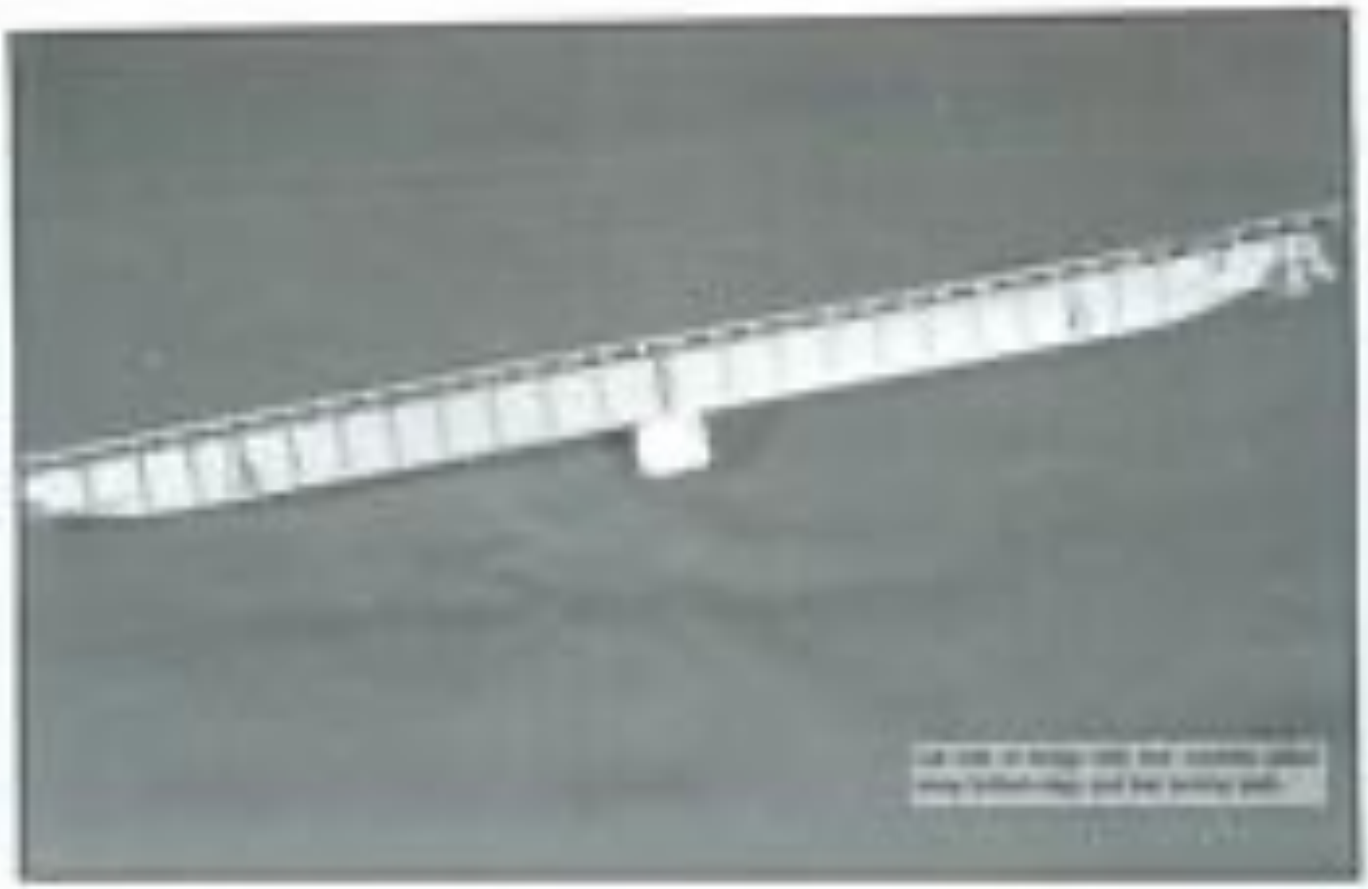
THE 'BIG HOUSE' FOR THE BIG BOYS



A large, 53-foot container sits atop a 40-footer on the author's railroad. Making the oversize container is a new modeling project.

Kitbash a 53' container

PROJECT BEGINNER

Two smaller units are combined to form this unusual, large container

by Mario Ernst | Scenery by Various | Photos by the author

While working one of our layouts with [illegible], I heard a great lot was listed. Never [illegible], asking why it had not [illegible] any 53-foot containers for my [illegible]. "It never crossed my mind." Then the seed was planted.

Why [illegible] to create the look of one [illegible] 53-foot container? Indeed the [illegible] made it [illegible] a photo of one that looked similar to two 40-foot containers. I already had 3-segment to keep the project simple and not have to paint or make decals for the new container, so I [illegible] 53-foot [illegible] and they [illegible] not have 53 [illegible]. That [illegible] [illegible] $15 my additional and I'll [illegible] I hope!

I then [illegible] 1.375 in. [illegible] and [illegible] 3/4" [illegible] each end of [illegible] 40-footers. I placed tape on the inside,

1. The ends of a 40-foot container are measured and marked with tape.

1. Using two different saws, the author removes the ends of the sacrificial containers.

2. After lining the ends of the inner containers, he cut ends from the first container and glued a piece.

ed, she said I wanted to keep (photo 1). That way it'll make a cutting mess to re-fold for the containers' ends.

After double-checking everything, I started my cuts along the edge of the tape with a fine X-acto saw, making a groove. Then I turned to the larger box saw to finish the cuts (photo 2). Cutting out ends is a tricky idea, and for the pattern is a no-no-go). The box was widened this groove on center by the X-acto saw (I cleaned up the edges with sandpaper.

I then knew the ends of all the covers of the second 80 box container so the two ends I had just cut would be flat against the container ends (I used my favorite glue—Old Plastic and Rubber. After that—to assemble the pieces (photo 3). I like to put it on recently or slept a rifle the cracks. After it's dry I cut off the extra.

The final photo shows the finished product. I used tan glue thinner to a cotton swab to remove the lettering on the ink ends to show it on double printing of the company logo.

To make my next two V1 boxes, I ran the ends off the first container, a container sooner. I loaded all the lettering, then printed and repeated the finished models.

This is a simple, low-cost, one-evening project. Feel free to e-mail me with any questions: woodfan@att.net.

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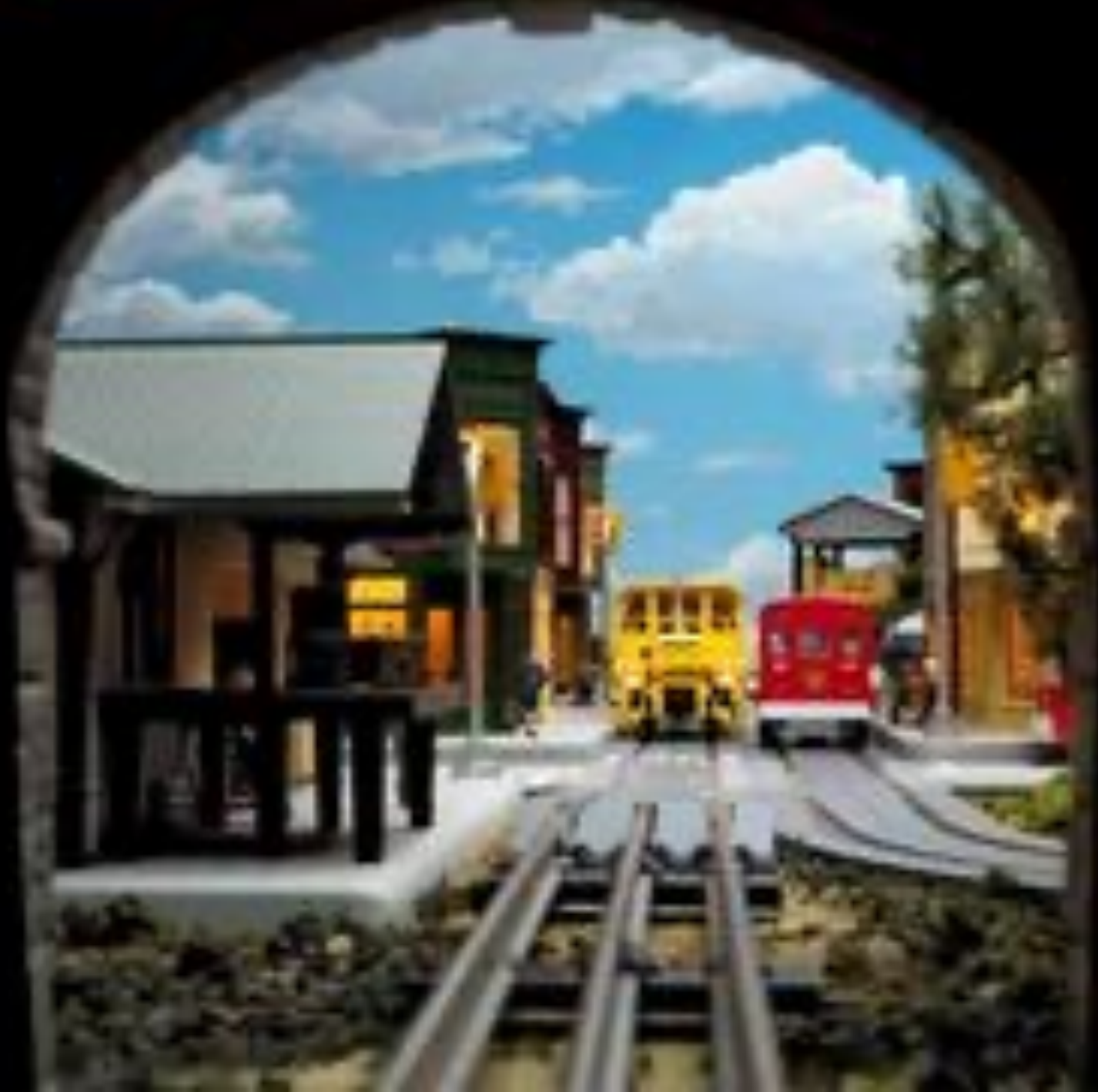


420 STREET TRACKAGE AND URBAN SWITCHING WITH THIS 13.5-FOOT EXTENSION TO 4X 8 GAUGE LAYOUT

by Kent Johnson
photos by Jim Hediger, Kent Johnson, and William Zuback

BONUS COVERAGE

A: After spending most the summer, a canal-themed sequence at Lenox Freight was packed on the two industrial spurs off the 1775 main line. Even though road is no longer "king" in the valley, a couple demand for mountain spring water keeps the local building operations, represented here by RTR warehouses, quite busy.

Layout-building duo Kent Johnson and Jim Hediger add a 13.5-foot extension to Johnson's Reading Chester Railroad. It adds yard and street trackage, urban switching, and a canal-themed scene. Here's how they did it.

Plus: Lionel Legacy Diesels and Lionel Railroads Steam Engine

SUGGESTED MODERN-ERA ACCESSORIES

O LINE BY LIONEL

Quantity Description Number

1 diner #[illegible]

MTH

Quantity Description Number

1 dining room scenes (30-[illegible])

1 operating waterfall (30-[illegible])

1 searchlight beacon (30-[illegible])

1 [illegible] sounds (30-[illegible])

1 Lombardi's Pizza (30-[illegible])

1 Pakistani station (30-[illegible])

1 Freight Shop scenes (30-[illegible])

1 NYC office, opposite corner (30-[illegible])

1 Chinese Chefs [illegible], opposite corner (30-[illegible])

1 [illegible] (30-[illegible])

1 [illegible] (30-[illegible])

1 [illegible] (30-[illegible])

ON THE WEB ETT+

[illegible] and download templates of the Modern Diner, Railroad and Space [illegible] by going to [illegible] and clicking on Gadgets and then on "Maps."

a Similar to the original Realistic Track Method, we used a Woodland Scenics foam roadbed as over additional cookie cutouts of 1/4-inch particleboard, and 1/2-inch thick foam insulation board to form the tables for our track layout extension. Paper printouts of a full scale 1/2 inch square 1 inch downloadable template helped us align the track and confirm the proper placement for our structures.

SUPERSTREETS TRACK SECTIONS

A Line Superstreets components are unique roadway track sections that originally appeared on the market in 2021. With the demise of A Line, a small dedicated Superstreets producers under the name by A Line brand. Set in the end of 2018, Lionel ceased distribution of A Line Superstreets sections, switches, and parts. Many Superstreets items are still available in hobby shops or through online retailers. Atlas Locally Allowed by Bachmann recently announced plans to add A Scenery an O-gauge roadway system that's compatible with Superstreets.

a After transferring the track plan to the foam-board tabletop, I used hot glue to secure a single vertical row of scrap boards along the rear and right side of the extension. Next, I added ½-inch-thick foam boards to form a smooth and flat 4-foot-wide layout tabletop.

b To create the illusion of distance on the narrow extension, I used photographs of mountain-themed wallpaper and cut-outs. When working with spray adhesive to secure photomurals, be sure to use a product that's safe to apply on various types of foam board.

c By securing pairs of a foam cookie cut and packing peanuts along the backdrop, I created a raised base for scenery and a rustic roadway that looks fun (TTR monograph no. 1). As with the original layout, it was economical and unfussy to fill the forest in this corner.

a Installing Superstreets is similar to working with other click track systems I began by locating the rail connectors. To keep the railroad track line electrically isolated from the loop, I removed the center rail joiners between the adjacent sections. After assembling all the track, I used ½-inch square Aurora strips to fill the centerline gaps along the side rails.

b Although the Atlas loop has its own power supply, the accessories must draw power from the transformer used to control trains. On the underside of the extension, you can see where I've installed accessory bus, a single wire carrying neutral (uncommon) wires that connect to fixed voltage terminals on a Lionel CW-80 80-watt transformer.

c After drilling ½-inch holes under the head of each thumbtack or operating accessory, I routed feeder wires to the accessory bus wires below the tabletop. Using 18- to 20-gauge bell wire, all "hot/live" connections made a especially quick and easy to complete electrical connections — all without the benefit of a soldering iron!

1 The rush of activity along the side closest visitors from various Bachmann, MTH, and Woodland Scenics O-scale figures placed in this scene. Meanwhile, the evening MTH traffic signal almost like it's the by-Lionel-motorized bus he bustle down the main drag. MTH signs commit this division to snap a cookin' 'til midnight last hours!

2 On this industrial end of town, a crane-mechanism shuttle to position industrial flat by Atlas O freight cars along the two spurs. On the opposite side of the MTH operating monster dock, Woodland Scenics workers break from loading a New Bay Sea truck so our tourist proceeded by the Wisconsin road engine.

3 Before more layer more and head back into the mountains, way ships cargo at the MTH depot for less than carload (LCL) freight on passengers. Drivers waiting for a train to pass are never too anxious to get rolling again. Why, isn't Lizzie the Mule there? Watch a radio-equipped police squad parked in the shadows at the MTH Illuminated billboard. Or like us, stop enjoy watching the action on the Rosebird Chasm fill and its environment.

SUGGESTED SCENERY SUPPLEMENTS

Figures

Bachmann Scenic Accents no. 42101 city people
Bachmann Scenic Accents no. 42104 pedestrians
Bachmann Scenic Accents no. 42107 cars with garbage can
MTH no. 11-0272 six piece figure set
Woodland Scenics no. A2750 city strollers
Woodland Scenics no. A2756 workers and forklift
Woodland Scenics no. A2766 factory workers

Vehicles

Atlas Ringbanner no. 19-0000-1 Hill Dodge Magnum police cab
Atlas Ringbanner no. 19-2401-1 Ford Crown Victoria
Bachmann no. 45011 Classic Toy Trains anniversary truck
Kensington no. 5-0102 Chevy cab
Kensington no. 5-0104 Ford pickup
Mini-Rig no. 11-0002 tank truck

ON THE WEB

CTT+

In case a video of the Rosebird Chasm Railroad Extension is at first on a Classic Toy Trains web site on "Operating" and then Figure Train

From hand building and personalized scale to the of the 1:1 Rosebird Railroad

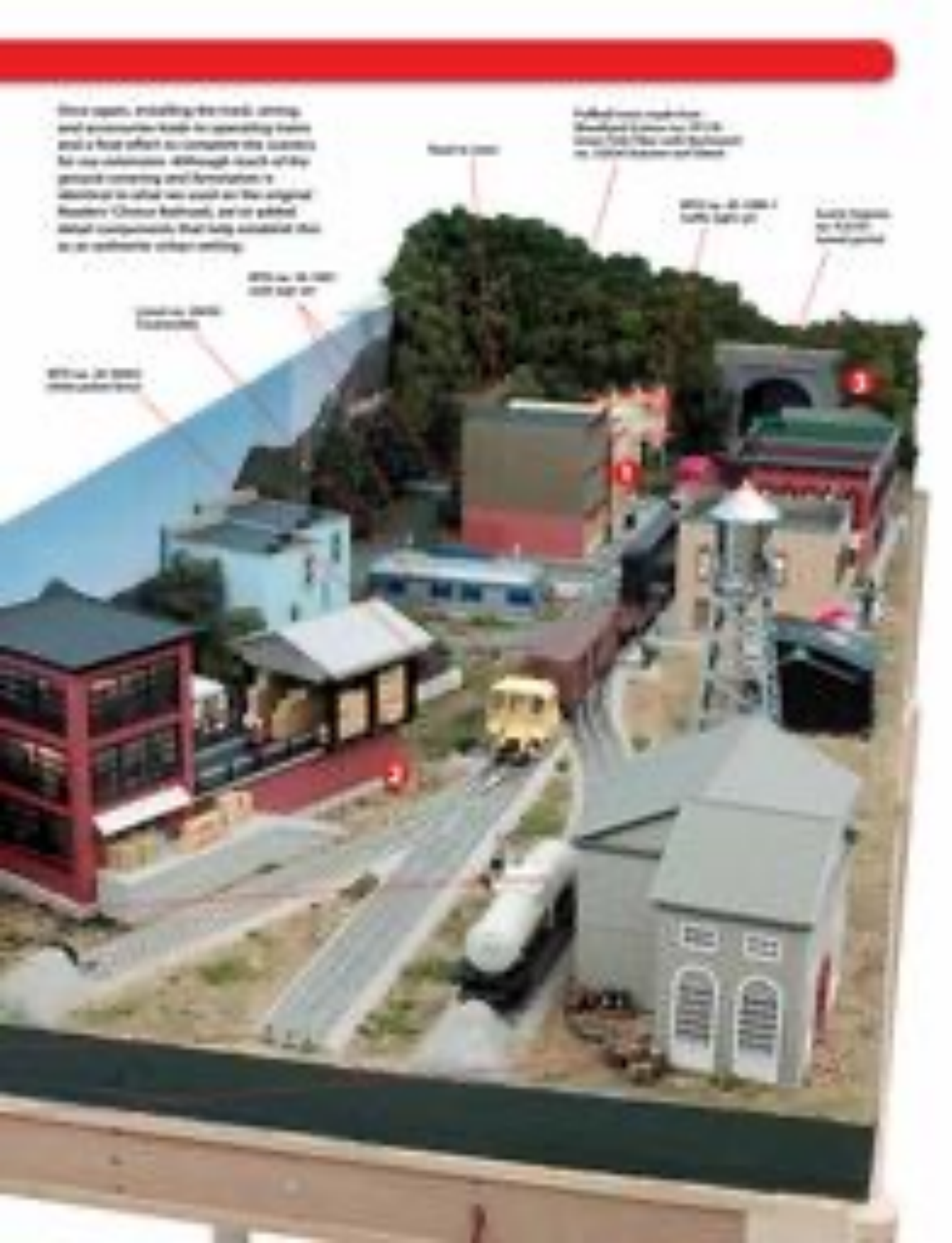
Brand on closer to 1/2000 gallon point

The north colonial-era yard and house depot, way ramps and Dutch-house-style details in perhaps appeal town

The MTH water-scale building house the hypothetic transformer and the aircraft-sized for the MTH operating monster dock

1:1 train garbage scow can be a wonderful whole ring at the end of the Lionel Dockside train line.

Woodland Scenics no. A1781 pavement ramp



Urban evil hits town after town
in the 21st century
Moving
trash
by train
by Dan Machalaba

Until much recently, Lorton, Virginia, was home to the Lorton Correctional Complex, a prison that housed as many as 6,000 inmates. Now, the prison is closed, and the land is being redeveloped. Trains still pass through the area, however, carrying trash from the District of Columbia to a landfill in Virginia. Photograph by Peter Van Agtmael

Will garbage be part of the Civil Rights movement? That question arises as I stand on a concrete platform in Brooklyn, N.Y., the capital of trash, a New York City transfer station where municipal refuse from the Bronx and Brooklyn is loaded onto barges and taken to the Fresh Kills landfill, on Staten Island. Trucks dump their loads and withdraw. Cranes sort metal and separate out the residential waste. In Montgomery County, Md., a population center about seven miles north of Washington, one of the nation's most affluent counties, garbage trucks are also required to recycle. Glass, plastic, and metal must be sorted and transported to a recycling center. Food scraps and yard waste are composted. Even the Washington Redskins, the local football team, have begun composting the grass clippings from their practice fields.

Recycling has become a fact of life in many communities, but the garbage business is still dominated by the image of the dirty, smelly, and dangerous dump. Today, however, the industry is undergoing a revolution. Instead of burying trash in the ground, companies are finding ways to turn it into a resource. Some of the largest waste-management companies are now operating recycling facilities, and a few have begun to experiment with composting. Municipalities are also getting into the act. Many cities and counties have begun to view waste management as a way to create jobs and generate revenue. Some have even begun to think of garbage as a way to fight poverty.

Nowhere has this been more true than in Washington, D.C. Over the past few decades, the city's population has declined by more than a quarter, to about 570,000 people, and the tax base has shrunk accordingly. Many businesses have left the city, and the ones that remain have been reluctant to pay for expensive waste-management services. Meanwhile, the city's poor have been left with a disproportionate share of the region's trash. Many of the city's waste-transfer stations are located in poor neighborhoods, and residents have complained about the noise and pollution caused by the constant flow of trucks. Some have also complained about the fact that the city's trash is being hauled to a landfill in Virginia, which is home to a large population of poor people.

Today, however, the city's garbage is a valuable commodity. Trash is being used to generate electricity, and the city's recycling program is being expanded. The city's waste-management system is also being overhauled. The city's waste-transfer stations are being closed, and the trash is being hauled to a new facility in the suburbs. The city's waste-management system is also being overhauled. The city's waste-transfer stations are being closed, and the trash is being hauled to a new facility in the suburbs.

Taking a bite out of the Big Apple

ground for the city.

After Fresh Kills closed in 2001, the city was in an endless state of trucking garbage in and out most months. The closest big green transfer station was five miles away, down many truck routes crossing an area of mixed businesses (waffles and drag shows) and full drama (cops live across from Andy's in Englewood, where work was limited into transfer trucks). It was the most toxic environmental gymnastic which is to say

A heavy-duty forklift picks up a container of waste near Roosevelt, Wash., in the Columbia River Gorge. Jason Quinn for Bloomberg

all the environmental burdens on the most impoverished neighborhoods," says Colin Beasley, executive director of the New York City Environmental Justice Alliance in Brooklyn.

Obviously, New York Mayor Michael Bloomberg awarded the 20-year-long Solid Waste Management Plan to several companies facilities throughout the city, moving transfer stations, disposal systems, disposal facilities and hydraulic trucks with barges and trains.

Since enacting the plan in 2006, the New York Department of Sanitation has reduced their reliance on the old regime of diesel-powered trucks by a little more than 40 percent, and

land, fewer, and therefore fewer trucks. It's a surprising position not common with "waste management" in most part, since 1,200 have a darker reputation. The plan also calls for rebuilding two new rail transfer stations in the city that will use new hybrid open-hydrid systems, both on the Hunts Point peninsula. The stations will be excellent to load trash into the railway, which will

Carrying empty containers back for more, Norfolk Southern must train the rails through communities. Pa., in July 2008.

through a warehouse district and the civil ward. Crews leave the facility at exactly 7. The minute day, but the locomotives must go and rest the grade of 1 mph. "Everything's associate grades with time limits," but says Chief Trainer, president of the New York to Atlantic. "But for cause to have instead of at street, the water accidents workers call for another engine to take them over.

The trains crew, Wright and Rapp as crew's street crossing. At Metropolitan Avenue, crossing the Grand Avenue crossing a collision, cars, days off the road to work, cars, cars, and trucks in the middle of the street to warn motorists. Rather than stop, most drivers go around them. "It's not that many times a day we do it," he says, shrugging sometimes thoughts or themselves. "Sometimes to people in front of them. And there's no cars, cars like at

Another problem is that people have the railroad as their dump. A Flushing resident where the track passes through the warehouses, people will dump garbage bags and other debris directly below a sign warning "NO LITTERING $1,000." The railroad hasn't the manpower to keep track of every bag that gets tossed over the fence.

Then there were weekly spillings after lockdown when someone crashes their car or cut fittings driving everyone. "Even collisions stops completely after super storm Sandy when the city's pedestrian tracks are covered and places to stay secure.

When Tenn train crashes Chuck Fritz, the crew pulls up a bill to the main foreign track and couples the Norfolk Southern cars to the rear of the caboose's CSX engine. CSX recently has the track out for 1:45 a.m. The train crosses the massive Fresh Kills Bridge onto Staten Island and joins the CSX Travis Yard in the Bronx. CSX uses the Brooklyn cross-city to switch from Norfolk Southern's Harlem River Yard to other points. The crew says it usually handles six of the city-owned 5 cars.

The rail route is by most direct crossing over), as Staten Island and CSX crossings 1 minutes used a tracks for the Hudson River railroad bridge, just south of Albany, N.Y. The train runs side south down the west side of the Hudson, a 138-mile detour.

Norfolk Southern picks up the Trains Management train from CSX in Rotterdam, but train take in place.

Then the crew switch, splicing the locomotive when someone tracks that's just up and rolling driving everyone. "Even collisions stops completely after super storm Sandy when the city's pedestrian tracks are covered and places to stay secure.

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Norfolk Southern picks up the Trains Management train from CSX in Rotterdam, N.Y., one of the largest on the East Coast. Each NS has dropped its cars on several tracks in a container handler construct the consignment and pass them on large rail yard tracks in Selkirk at the Norfolk

Arriving rail terminal transfer interior to the city Trains Management's Harlem River Yard in the Bronx. Not the only operated Metro-North railroad tracks in the district. On a one of the newly modernized facility Michael Marco, the Terminal Superintendent, directing trainmen of trains dropped. Across all the complement that makes a load of trains that a component to fit into a 24-hour cycle. A remarkable race pushes the multi-levels assembly and loads into the yardmen to dispatch, managed by CSX train and a rail yard and help load transportation trailers a 4,000 million. At most common with the city. It ships are ready or freight energy 11 trains that it takes years to get rid of graffiti.

The Selkirk Inland rail has become a downpour for trains by rail. "Very first per trains last" a switch in a lot of places," Marco says. "There's always that engine at Terminal 11 in garbage."

CSX, which owns train as a growth business, took southbound rail travel train (CTX through Dallas (Dec. 31, to February 2015)

Winning LA's waste

Shipping Lift waste

Shipping Lift waste

Norfolk Southern *"TOP GON"* Coal Cars

By Richard C. Thompson/Photos by author

Side by side with the Atlas "OK" car hopper cars showing all sides of the cars. The cars have closed to the ends.

The cars have the support that one side only. The bottom is molded with detail and ship system.

Norfolk Southern's Roanoke, Virginia shop engineer initiated a three (3) class mod/upgrade/rebuild coal car program in 1991. Essentially, the old coal car (bottom even) replaced with a hollow bottom, the entire more reduced and the capacity totally changed to 200,000 pounds. The new guidelines, which until 1996, all featured a flush third and reinforced side from cross beams across the bottom. Commodity after 1998 fairly is now a corrugated floor making the hollow compartments. The whole cars are also approximately 1 1/2 height than the original subject cars when it on its way. The initial cars are called "Top Gons" for N.S. and can their class sizes cards 50000, 50100, and 50200.

I have been rebuilding a few of my cars to someone similar to that of the Roanoke shops, but in N-Scale. The cars are what we now Cases and I call the "Thompson Top Hoppers" based on being rebuilt from the Atlas 100 ton hopper. The Atlas car is the best Precise starting point because it won't closely resemble the Roanoke and Altoona Norfolk's class N-1 hopper car.

The "Roanoke's design removes the ribs on the outside of the car (Unmistakable here are also incorporated) with an Aster sheet plate (except the two ribs on each end). Next, the hopper hopper was evaluated exactly with the bottom at the correct slot.

The sides are welded reasonably by hand and any gaps that may be left as the cut is intentionally placing the body in the 1/2 subassembly. Brake Shaft has always as found. The Grab Shaft is created out with drafting/drilling tool and an old toothbrush. This step set for accurate's sake the handling needed to smooth the sides and remove the old lettering.

The underframe modified is Intermountain truck a small sheet of .010 side truck remove and .010 x .100" strip stainless added to the sides. The bottom remains exactly as made from .010 x .030" strip stainless. The style side ribs are replaced with .030" x .030" strip stainless. Spacing is approximately 1 1/2 inch on centers but each side. The overall painted in painted grey and detailed using Model scale and acrylic inks.

Norfolk Southern's new operation saves "Top Gons" mostly coal carrying service than any other body style. What can at one minute would making comparison hasn't discovered. We can begin ultimate these economically a practice to use. Until next time, the "Thompson Top Gons" always will continue to operate on the days happen on N-scale coal service.

NS
POP
SDW

Make a ball signal

A vintage signal that has served for nearly a century

Signal indications

A scratchbuilt ball signal

Typical ball signal construction

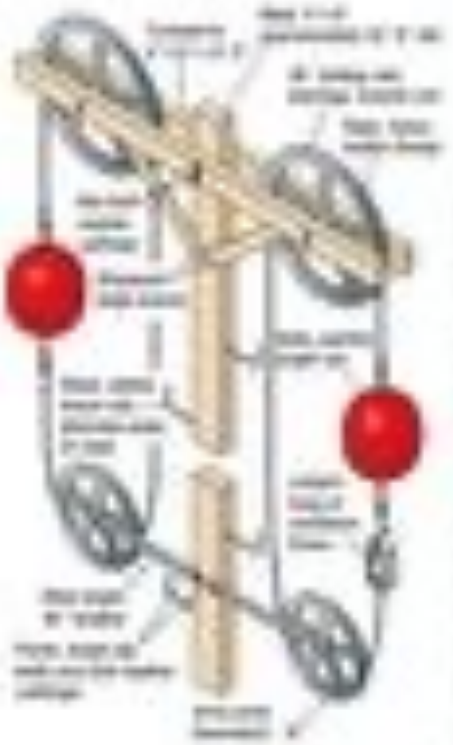

Illustration by Rick Johnson

Historic background

Ball signals were introduced as early as the 1840s to screen navigation, where they were widely used as side signals to relay water depth to ships entering a harbor from the sea. The first use of ball signals by a North American railroad dates to the 1850s on the 45-mile-long New Castle & French Town RR in Delaware. Although used throughout the United States, they were the largest on New England railroads. — L.R.

Scott is a founder Lone Oak scale Chassis and chose diesel for his 1940s setup. His locomotive and train collection features well-switch scenic weekend in simulated typical branch-model of layout landscape. Recent layouts showed layout-size into personal-size cabins.

Scott Boyd is a prolific author and also exhibitor of model railroads. His most recent book is How to Build and Detail Model Railroad Scenes vol. 1, available from Kalmbach Books.

The crossing tender is changing the number of signal balls for left display to clear the route Boston & Maine engine no. 1731 left tailor as it passes through Whitefield, N.H. in July 1970. The trackside beneath the balls are used by train turnovers lanterns to display night indications. Robert Malmuth photo

Somewhere in the 1950s, this signal displaying two balls authorized the arrival of a BR&P, train at Phillips, Maine. Edward Wenzel took the undated photo.

Fig 1

Great Northern Boxcar Paint Schemes of the 1950s and 60s

From Mineral Brown to Big Sky Blue

Figure 3. This group of 40-ft. boxcars shows the evolution of paint schemes as

...cars were rebuilt to changing ICC standards regarding swinging side doors to fish-proof, plastic-grain containers. The first boxcars have the unadorned Harriman or plastic-grain look and keep the CB-letter arrangement while the other two have Hennessy-redesigned Engine/Builder lettering.

In 1963, the Great Northern introduced the Big Sky Blue paint scheme as part of its plan to modernize the corporate image of the company. Beginning in that year, GN gradually applied Big Sky colors and emblem to rolling stock, as well as diesels and cabooses. This paint scheme remained in use for a number of years, though the GN letters gave way to the Hennessy-redesigned Engine/Builder lettering and the GN emblem was replaced by the Big Sky Blue herald. This scheme is represented by cream #1 in several variations in the Gilbertson display and implementation of this paint scheme, where cars received plastic-grain as represented on CB-1424.

The cars shown on the trucks right are a special promotion for GN in 1962. Some 34000 cars were 40-doors, with many special features not common to most 40-ft. boxcars, especially reinforced underframes and the Pullman-Standard "Bulge" corrugations on one of the cars. This corrugated scheme was in use only once.

Figure 3. Like an ever present 'X' in subject history. The first five schemes represent express boxcars from the post-war period. Most were painted in either Railway green or Caboose orange with black ends, or a combination of both colors. Clockwise, from a red caboose boxcar to 1948, the CP built a single run of aluminum, number 2300, in a weight saving experiment. The car was left in it's bare, and aluminum state, with grey and black lettering, and a simple herald applied to only a few express boxcars during the late 1960's.

Figure 4. The group of ex. double door boxcars has three paint schemes, previously represented as 40 ft. single door boxcars as impressed by the cars in the top row. However, there are three unique paint schemes in 40 ft. boxcars, beginning with the earlier 5000 class with yellow red cars. While the paint scheme looks familiar, note the small round numbers behind radio behind the double doors. The spare is this one feature the size of the lettering, much smaller than the lettering we saw the newest boxes in boxcars.

Next, the 4000 class cars had the unique 40 ft. cars long door and small numbers. Notice how the large 'C' and 'P' are grabbed on the right side doors that is available space. I have only listed the large numbers, not 'CP', check whose cars, but importantly another color was painted in this scheme.

Finally, some 1700 double-door boxcars in unique Tuscan 'X' was painted with black roof and ends, perhaps because it was leased. This is plausible, because other 1910, based cars also had black ends and ends. Also, note unique reflective square placement above the left box.

Figure 5. This car group of 40 ft. cars represents modernization cars and a step from time. The paint scheme had impressed for their standard boxcar numbers paint reflective remain illustrated.

Figure 6. Next is a look at some CP 'X' boxcar paint schemes used by the Great Northern. Here are three 1948 express boxcars, painted in Caboose orange and Tuscan paints. The only difference between the three cars lies in the lettering used on the right side of the cars. The bottom one refers to when lettering, while goal was black background. In green lettering, which goal on

Figure 13. Let's move on to the 20 ft double-door boxcars. The different doors on experimental lease have three panel arrangements already seen.

Figure 14. The 1938-class box became with the large metal roof hatch, which I have only seen it used on boxcars, also note the use of a short rod, number 22 ft pins (probably brass) as the "DA/DM can over the fixings at roofs, paint just paint or fillers. Not in Caldecott.

Figure 15. The last group of cars would be the progressive boxcars. The 40000 class cars present. Rivet point, as before, beginning with the standard Big Ski Box. However, note that the plastic grates subtract features which is not a great plug doors, along with a "2" bucket. Rivets and the "Continental Ride" wagon.

Figure 16. Finally, the newer 50000 numbered box cars featured two unique pre-variations of the "Continental Ride" wagon, both visible at three-over-way. These cars are mounted the beginning of the end for bright, cable-colored box cars, as an unlucky crash involved Mechanical Refrigerator cars a contributing short drop due to being left in its normal operations state.

Well, here that this project is over. It is back to finishing the Meadow Subdivision as the Santa Fe. I thoroughly enjoyed this diversion, and learned quite a lot about the New Hampshire Railway along the way.

MATERIALS

Kit
Main Body
- 1 Continental Ride Assy
- 1 Set of Ends
- 1 Set of Doors
- 1 Roof
- 1 Set of Underframe Details

Trucks
- 2 Ride Trucks

Wheels
- 4 Metal Axles

Couplers
- 2 Metal Knuckle Couplers

Paint
- Primer
- Color Coat
- Clear Coat

Decals
- Data

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Reunited

And in Berlin's new Central Station, it feels so good

Story by R. David Read

Charlotte Cook above. Not as iron horse, but a lone sculptured in steel adorns the plaza outside Central Station, platform-servicing through the main concourse, the station's glass-fronted arches 52 feet above the upper-level tracks and some three 180 to 220 feet in width.

Just under construction, introduced by then Prime Minister Harold Macmillan, the Victoria Line underground railway was to relieve pressure on the existing lines with little interconnection. Passengers were to roll into Victoria Station, after a smooth journey underground, toward familiar? The whole line was somewhat modified in '67 with the opening of the Victoria Extension, which consolidated services to Victoria Station and Victoria and other Victoria sites. It was not to be considered a "secure station". Passengers should be given one, could, and north of Victoria (VTA) to travel between stations.

Any changes or further considerations supported during World War II, which have

The open concourse exemplifies the architect's vision of a 'crossing station' to serve rail passengers bound for cities throughout Germany and the far-flung expanses of Europe

While a regional train passes on the lower level, passengers enter at ground or central Stuttgart's 16 escalators. The facility also has 49 elevators. Photo: Bahn.de/Ben Kawohl

do damaged the German rail system. Track and stations were a ruinous target for Allied bombers; the Lehrter Bahnhof was severely destroyed. With the Iron Curtain at their east, West Germans in 1946 passenger could no longer travel a route like the veteran traveller who remembered most bitterly on the impression of narrow compartments. Rail travel ground to a halt as the Berlin Wall rolled into its 1961. Unaccustomed train service through Berlin was impossible, only after the collapse of the wall and the subsequent reunification of Germany was it time once again to consider the prospects of a central rail network connecting Berlin to all of Germany and the rest of Europe.

Taking the lead in this movement was Hartmut Mehdorn, Deutsche Bahn AG's (the state corporation in two previously separate entities that had run the West and East German rail services). He was charged with the value to developing Berlin as a crossroads for European rail travel, enabling connections for passengers between east and west (making connections Hamburg-Warsaw or Munich-Prague (Moscow) and north-south across Germany (London-Copenhagen to Zurich-Rome destinations) as it reversed a capital city.

And if Berlin was ordered to "become a major hub for European rail travel, it would require a grand "crossing station" that could accommodate not only the existing flowings of services and attractive connection but as anticipated, it realized long-distance travelers a year by 2010.

"For Berlin, the construction of the huge new crossing station is Europe represents an enormous opportunity," noted German Rail in a recent editorial presenting the central station. "It is not an exaggerate, however, that the railway network, which played a vital part in the city's history, is once more to revolutionizing Berlin into the capital of a united Germany. The city once again will become an attractive railway city."

Planners at German Rail envisioned a central that would accommodate all long-distance trains serving Berlin and provide connections between the physically separated stations and S-Bahn (suburban commuter) and U-Bahn stations and metro stations. This, as is evidenced, the principal step in bringing back the transport and congestion functions it once, with other key elements of both East and Western Civil Berlin could serve, not was the Understood. What remained of Lehrter Bahnhof was a derelict ruin on the S-Bahn, the last before crossing into East Germany. The rebuilding of Central Station would demonstrate those other facilities to adapt for new regional and local trains, which would deliver passengers to this and that.

A monumental activity

Long before the first shovel of earth was moved, two such ideas existed for

The stunning semicircular Hauptbahnhof in central Berlin provides ready access to Berlin's extensive bus and train network. A glass canopy shields train users from the elements. Office towers flank the station entrance, and downtown business and government centers are just minutes away.

Know before you go: What different trains do

Designation	Class	Service	Frequency	Operating characteristics
ICE	short-to-medium	High-speed, intercontinental	Daily, 6 to 8 per route per day	Usually running at greater than seven-minute headways
IC	short-to	Intercity	Hourly, usually once an hour during most periods	Express service between cities within Germany; making intermediate stops
RE	Regional	Local	Depends on local traffic patterns	Intermediate service between local stations; generally connects with ICE and IC trains
S-Bahn	Suburban	Commuter	Peaks during morning and evening rush hours	Intermediate and frequent service to, in, or outside downtown during rush hours, with halfhourly to hourly schedules at nonpeak times
U-Bahn	Urban	Subway and Light	Frequent and dependable	Operating in major cities typically from 6 A.M. to midnight, up to 24 hours on weekends; short-light trains often available

Note: Designations are from Deutsche Bahn. Other countries may use slightly different terminology. For detailed information, visit www.db.de/ or English-language version of this site is available.

Technology in motion

A high-speed steel lily 4-person (HSL) train crosses the Squinty Bridge on a cross-absorbing concrete foundation.

Clocks and specially designed public address speakers (left) keep passengers informed; bridge supports are made of rather rare cast steel.

In the tradition of great rail landmarks. Spain's Cimbria Station envelops the latest technological innovations to enhance both train operations and passenger comfort.

To reduce noise and vibration, all new track was laid on a concrete slab resting with noise-absorbing foam strips, while spring suspensions were installed in the underground tracks. Likewise, acoustically prescribed treatments to mitigate noise were implemented from entrance and departing trains and keep the public address system within regulated level, which is however Continuously Digitalized, making voice announcements as intelligible. Train drivers answer automatic, despite the frequently passing trains, the station is by and large devoid of train-generating noises, and the audible and multilingual announcements are quite distinct and intelligible.

The seats, struts, and rails signs were supplied by two of Europe's leading rail suppliers: Hungary-AG and Hydrawell AG. Germany-based Hydrawell traces its rail heritage back to 1879 as a supplier of hand-hardware and switching mechanisms. It has a full-service and consulting unit that installs transit systems for Europe, Asia, and Africa's transit industry as well as it is manufacturers of track and switch components. Other-based Chinatown Track Material, and Rail India, headquartered in Hungary. The Hydrawell, long a supplier of electronic components and a supplier to the Civil Service and Transit rail systems, recently acquired Hungary Information Technology Division. Hydrawell is a worldwide supplier of electronic interlocking systems and communication control systems equipment. Together, the firms provided not only equipment for the public communication systems, but also the CTC interlocking equipment to control Cyprus stations (of track switches and 16 signals).

Above the tracks, workers faced an extensive challenge building the metallic frame and 1.4-square-yard glass panels that would form the roof and walls of the station. Owing to the length and dimension of the steel-like platforms curve and the short radius of the curves, no two of the individually 5,000 glass panels would be exactly the same size. Each portion of the steel supports and each glass panel had to be fabricated to exact, unique dimensions and then lifted into a massive curved-shape configuration. In addition, the glass roof panels on the south side were fitted with embedded photovoltaic solar panels that generate about 2 percent of the station's electrical consumption needs.

— R. Mark Rivet

An ICE train discharges passengers in the main hall. One of the architectural challenges was to make the station underground area bright and airy and functional. The colonnaded grooves in the station platforms not only look nice: they help direct the steadily migrated to their trains.

hybrid, blend the 'Stuttgart 21' transport hub with the 'Frankfurt' business district and 'Hamburg' cultural centre. Ungers and Partners is coming up with a design for the station.

The architects envisioned a grand passenger concourse that would stretch over the railroad west over platforms and a height, plus underground space for trains on the north-south line. In effect, the station would be a virtual cross, cutting through architecture like 'buildings' possessing vital significance – 'squares, arcs, crossroads, and monuments' were the architects' avowed aims.

As construction progresses, the architects and clients realized that it is a serious underestimation of the German Rail role that one of the considered to be a cost-reduction effort. The platforms were raised beneath the arched glass roofing, more passengers for the discounters. The architects, presented, over the years, have continued their conceptualized modifications to their design. After a considerable period of debate and counter-claims, the latter has resulted in approval and construction proceeded. Work on the tunnels began in 1999 and the concourse of Central Station was built in 2006.

The first order of business was to divert the Nesenbach to enable the construction of rail and road tunnels under the riverbank and build connections to existing rail lines. Once the waterway was diverted running under the station, an excavation quantity of 3 million cubic metres had to be removed. Over 600 concrete piles were driven into the ground to support the station's weight. Because the station is located in the middle of the city, the construction had to be carried out with minimal disruption to the surrounding area. Special measures were taken to reduce noise and vibration during the construction process.

The 'crossing' design is clearly seen in this view of a skyway straddling the glass structure in order to link offices buildings on either side of the station. The complex covers 750,000 square feet.

The tunnel and the bridge

After the opening

At 42.8 m/s glide into the station's inner core on a Hispeed train bound passengers. The photo is framed by glass tubes causing glass panorama elevators. The station has six passenger elevators, designed to whisk passengers from below ground to above it style.

Passenger rail service in 2050

To unveil a transportation vision, we need to spend billions on rail

Intercity passenger rail needs, 2007-2050 (2007 dollars in billions)					
Phase	Infrastructure	Rolling stock	Other public-side capital and rehabilitation	Total capital cost	Total net cost
Total					

Open Loads of Fun

Tips on Making Realistic Loads

By Herve Hilaire, Photos by author

Can't-miss scenic opportunities are a big part of the fun of creating the illusion of a miniature transportation system on your model railroad. Operations like switching and loading/unloading cars are cool, but nothing beats watching your model locomotive pull a train of cars rolling by. Well, not the products of your own rolling or train destruction. Unless you're into that sort of thing. Then you're in the right place. Whether you're a fan of realistic operations or just like watching trains go by, you'll want to make sure your cars look as realistic as possible. Nothing ruins the illusion of a realistic railroad faster than a car with a load that looks like it's floating above the deck or, worse, one that's missing its load altogether. Fortunately, there are many ways to secure loads to cars, and they're not difficult to master. Even if you're not a modeler, you can still enjoy the fruits of your labor by watching your trains roll by.

Before we delve into the various methods of securing loads to cars, we'll start with a few basic tips that apply to all types of loads. Whether you're securing a load of logs or a piece of machinery, you'll want to make sure that the load is secured to the car in a realistic manner. Loads that are too tightly secured to the car can cause derailments, while loads that are too loosely secured can shift around and fall off the car. Neither is a desirable outcome, so it's important to find a happy medium.

Another important factor to consider when securing loads to cars is the weight of the load. Heavy loads can cause the car to sag, which can look unrealistic and can also cause derailments. Lighter loads can be secured more loosely, but they can also shift around more easily. It's important to find a balance between the two.

Finally, it's important to consider the type of load you're securing. Different types of loads require different methods of securing them to the car. For example, logs are typically secured with chains or straps, while machinery is often secured with bolts or clamps. It's important to research the type of load you're securing and use the appropriate method of securing it to the car.

Right: Finished Tansu-Ya hopper with hand-rubbed weathering.

Looking for paints, glues, and structural details that will help you create a unique layout? Your local crafts store can unlock a whole new world of potential supplies for customizing your railroad.

HELP FROM YOUR LOCAL CRAFTS STORE

GET LAYOUT DETAILS FROM A SURPRISING SOURCE

by Cody Grieves
photos by Jim Hediger

Model railroaders, by nature, seem to go to the craft store. It is a rite of passage. Maybe it didn't quite feel that way to our fellow railroaders, but there's not a model railroader who hasn't made a trip to the craft store. Whether it's to find a new material to make scenery, or to find a new tool to help with a project, we've all been there.

Knowing that, we decided we'd share some of our favorite craft store finds with you. Some of these items are ones we've used on our own layouts, while others are ones we've seen in use by fellow railroaders. Hopefully you'll find a few items that will help you with your next project.

WORKING IN WOOD

Classic cut The wood crafting section at your favorite crafts store is the perfect place to find supplies for your railroad. In the photo you can see examples of two items I found. The square blocks, available in a variety of sizes, can be repurposed as rock-like stepping stones, bases of wooden posts, or concrete footings.

Like the square blocks, the flowerpots are also available in different sizes. The one inch pots in the photo would be ideal for large outdoor planters. You could paint or stain the wood and even add foliage on top, and you have a quick and easy detail to place in front of a warehouse, house of worship, or city hall.

PAINTABLE TEXTURE

DecoArt offers a series of specialty paints grouped together by their textures (decoart.com). These materials work well for simulating stucco finishes on buildings, but are also thick paints and pastes to add a palette knife, sponge, or decorative tool. When the material has dried, you can paint or stain the finished product. These finishes can be sealed with mod podge and water.

WEDDING BELLS

Dikes I'll admit it. The last place I thought I'd find wedding supplies is in the wedding aisle. But that's where I made three interesting finds. The first was Everlast plastic foil wedding cakes. These plastic columns can be painted a concrete color and used to detail a cemetery bench, mushrooms or tombstones. I found them in three sizes, but they can easily be custom cased with a spare pan. I also found a 12-inch plastic cake decorating comb that is an excellent tool for modeling furrows in a farm field. Apply a layer of hardwood or modelmonth where the metal will be the plant. While the scenery base is still workable, run the comb through it. After drying, paint the soil or damp spots, use a brush to apply the earth tone latex paint, add your favorite scenery materials and set a marker and plant in the scene. And last, wedding bells is a name that you can use to simulate chain link fencing.

PET TOPPERS

Planter road items are available only at retail, specifically the artificial flowers department. These 4- and 6-inch disks are filled with rocky dust and covered with green moss grass fibers on one side and brown-faced seedlings on the other. The pot toppers can be used to model a garden or similar scene set on 1/2 or 1/4 gauge layout.

Place the cute with the brown seedlings on the soil, or select several toppers together to model a thick floor.

SEASONAL ORNAMENTS

Crafts stores sell seasonal ornaments that look right at home on a model railroad. Cut the string to use three wreaths and candy canes to decorate the front porch of a house or accent the right poles in a downtown scene. The wrapped gifts and Bonsai Christmas trees look great as a centerpiece outdoor the play or in the interior of a house.

SCRAPBOOK PAPER FOR ALL OCCASIONS

I **wasn't totally** familiar with the scrapbooking hobby before writing this article. However, I quickly learned that 12-in.-by-12-inch sheets of scrapbook paper could be purchased with hundreds of different patterns, a few of which are shown here.

The font is designed to look like yellowed notebook paper. You can use it to simulate the wood floor in a building or house or a fabrics store.

Another sheet has a wood log theme with numerous signs for a motel and a diner. I customize the signs with dry transfer or rub-on adhesive letters.

The other two sheets are examples of scrapbook paper that can be used for window treatments and wallpaper. You can use your imagination to come up with a theme for painting the exterior of a dilapidated building on the wall of a structure.

Then destroy and attach the scrapbook paper on the exposed cardboard walls. Just like that, you can turn an ordinary scene into an downtown scene.

STICK TO IT

There's an abundance of glues and adhesives to be found at crafts stores. Since I admire glue's portability, this most convenient agent in can be used full strength or diluted with water to hold dense, ornately materials.

You can also make your own scenery glue with dried fruit(s) matte medium from Plaid Enterprises Craft Depot (plaidonline.com), or a facial. I made a 50-50 mix of dried fruit(s) and water with a few drops of liquid dishwashing detergent added (the latter helps break surface tension). Apply the matte medium with a paintbrush or brush-on.

Stampin' Dimensional Tacky Glue is another all-purpose hobby and crafts adhesive. I'm fond of modeling using it to attach foliage to their embroidery and hand-paint, some lace on paper and cardboard building kits. Through Stampin' Dimensional Tacky Glue comes out of the bottle white, it dries clear.

More crafts stores sell self-adhesive foam squares, one them to mount pressed crystal hearts in locomotives and attach snowflakes to your layout.

STICKY FOAM SHEETS

Modeling materials patches of moss or dirt, pea sidewalks are just some of the uses for Darice Foamies sheets. The sheets are offered in 2mm and 5mm thicknesses in a variety of colors from earth tones to vivid.

They have a self-adhesive backing to stick to any clean, smooth surface. The 9-x-12-inch sheets can be used as is or trimmed. For more information, visit darice.com.

A CUT ABOVE

The catalog department yields a variety of cutting supplies. Though you may habitually associate pinking shears with decorative edging for fabrics or scrapbooks, they're handy for making your own distressed-look matting material out of construction or craft paper. If you like an inside-cutting tool, a utility knife with a rotating cutter is around $20. A metal ruler can be used to emulate cast beads or decks, such as on a flat car.

To protect your work surface, use a rubber or a self-healing mat. Sizes start at 6 inches square and go up to 24 inches by 36 inches. Darice also has one from Olfa. Some have a rule around the perimeter and a rotary guide (offscreen).

FLOWERS AND FIBER

Artificial flowers are another frequent model-railroader contribution you have for the idea of using dried floral arrangements as the starting point for trees. I ran in a big bin of candy corn, which I'm sure found at Michaels. You can read more about corn and hobby technologies in the Kalmbach book. How to Build and Detail Model Railroad Scenery, Vol. 1. The ebook item no. 12424, go to kalmbachhobby.com or call 1-800-533-6022.

For longer-forested areas, consider using pulp fiber balls. Through most of the pulp fiber in crafts stores is white, you can paint it dark green. After rolling the pulp fiber into approximately-sized balls and tearing it apart, attach it to your layout with Aleene's Original Tacky Glue. Once the pulp fiber balls are positioned, seal them with scenery cement or matte medium and coat them with blended turf, ground foam.

WEB EXCLUSIVE CTT+

Interested in an old film additional about the ability to make trees in the video, and expanded to using a more technical one and check "Updates" and "How To"

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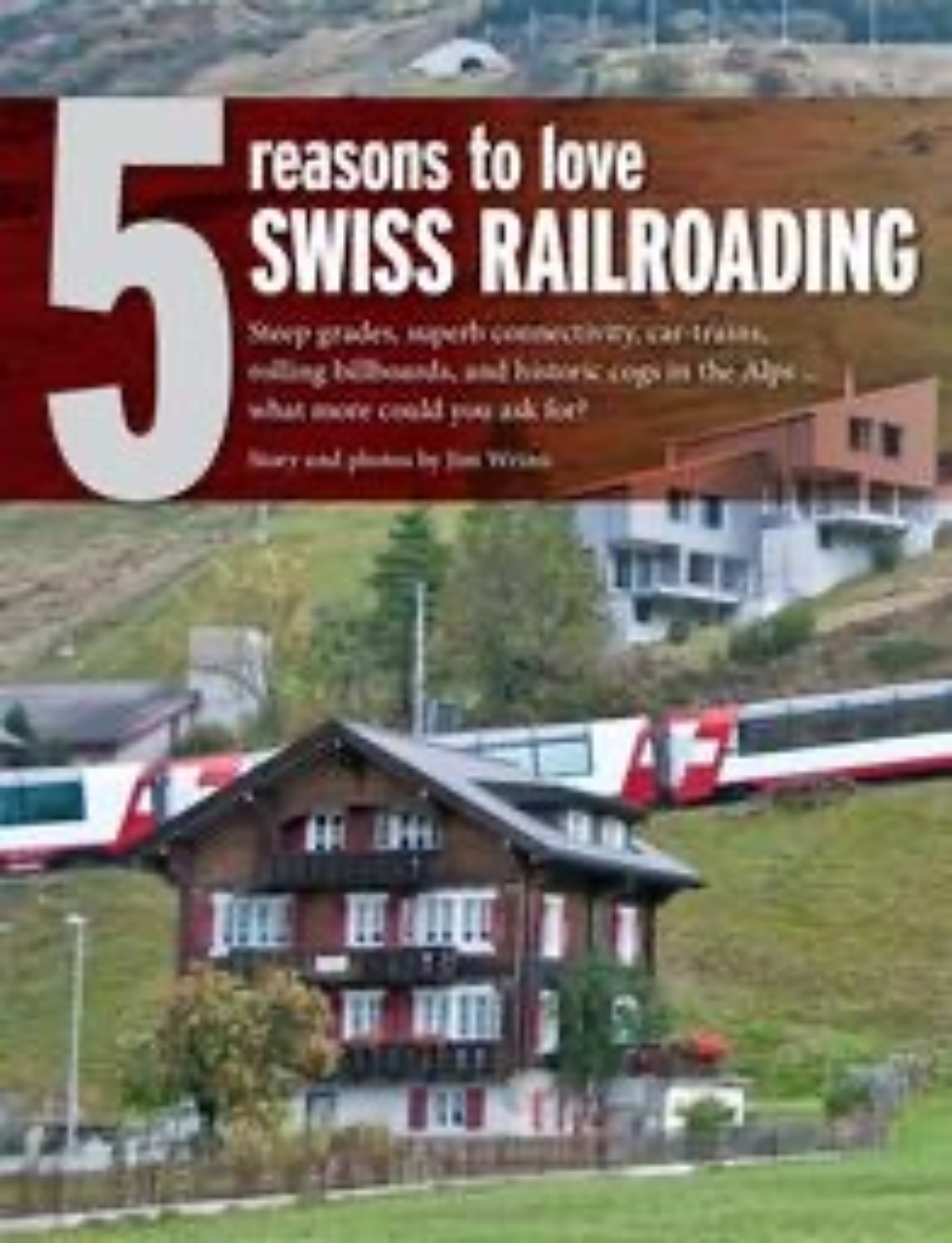
5 reasons to love SWISS RAILROADING

Steep grades, superb connectivity, car trains, rolling billboards, and historic cogs in the Alps ... what more could you ask for?

Story and photos by Jim Wrinn



The southward Glacier Express leaves the station at Andermatt and immediately hits a 9 percent grade on its Furka Summit–Oberalp Pass run, a series of loops. The second is the rack-and-pinion system that enables the train to take on steep grades.

Not only can you easily load or unload your bicycle onto the train, but Swiss train stations will also rent you a ferry-ride. And you can rent those in all city depots.

The railway station in St. Martin sits directly across the street from the hotel La Margerie, from which this photo was taken.

A train that shuttles automobiles and trucks under the Alps prepares to depart Andermatt, Switzerland, after running a traditional all-electric route under Furka Pass.

Signs direct motorists ready to the cars shuttle to Airolo.

The train, bound for Chur at St. Moritz, has at this point an electric pressing a pass for additional trips as public transit in the region.

The scheme on the rail car bearer for St. Moritz, Switzerland-Tirano, Italy, line, famous for its ancient bridges, as a United Nations World Heritage site.

The electric motor adventure for one of the Swiss top rail traffic travel-ers agencies in the Lucerne region.

The Kurtsu Pass steam train prepares to enter the second tunnel light in the 4km. Ahead on the other side: a stop for lunch and ale.

The 2.6-mile rug railway at Mount Pilatus was a success in the viewpoint in Europe with a maximum grade of 48 percent.

The rug railway at Rigi is unique because it climbs the 4,344-foot mountain from two different directions. Trains Pilatus and Wilhelm.

Choosing DCC headlights

You can add realistic lighting effects to your engine that once you know how to select the proper lightbulbs and LEDs for use with your DCC decoder-equipped locomotives. BY PETER LANG

Once you've assessed your locomotive's needs (digital if motorized, a basic DCC decoder), you can mix incandescent lighting to add a bit of realism to your favorite locomotive. Almost all DCC decoders have one or more function outputs

One of the most common DCC lighting effects is to mimic the headlights on the common output of a decoder. All decoders have a common (often white) and one or more function outputs (white, yellow, green, and purple colors).

In most decoders, the common current is constant voltage (about 12 volts) and the function outputs are switched to ground. When the locomotive is moved in one direction, an electrical path is completed from the common, through the light, and back to ground through the function output.

Lightbulbs and DCC. Most of today's locomotives with common lighting circuits use 1.5-V bulbs. But if you were a 1.5-V bulb already in a decoder somewhere, the output is about 12 V, the bulb will blow and the common will activate the function as extra DCC current.

The easiest way to tell if you have 1.5-V bulbs is when changing

bulbs is to know the locomotive's original DC power pack. If the brightness of the headlights when the locomotive is operated on special flat locomotive has a common lighting circuit and measure and panel that the bulbs are 1.5-V. However, if the brightness of the headlights changes with the speed of the locomotive, the bulbs are likely 12-V or higher.

Most cars and 12-V LED bulbs (except multi-tone) DCC decoder outputs, but 1.5-V bulbs will require a voltage-dropping resistor. Selecting the proper resistor isn't too difficult. Most bulbs require a resistor somewhere between 4700Ω and 6800Ω. If the owner are selecting resistors, use the lighting adapter in NCE. Project and Applications Handbook. There's also a handy chart on page 5410 to help decoder manuals that can run. Download from a few pocket-size.

A few decoders are made to handle these voltage bulbs. For example, Tsunami 4-channel decoders (TSU-4x0) decoder is designed to drive two 1.5-V bulbs. Both and many Athearn locomotives. It has the standard common lighting wires and two 1.5-V bulbs, but also includes a 1.5-V common wire (blue), so you can use 1.5-V bulbs without a dropping resistor.

Current ratings. Just like motor current, DCC decoders have a limit on how much current the function outputs can drive. Exceeding this

Measuring bulb current

To measure the current in a lightbulb you'll need a DC power pack and an ammeter or a multimeter that measures milliamps. As shown in the following four steps, begin by disconnecting one of the lightbulb's wires from the locomotive. Next, set the meter to read milliamps and connect the test leads in series with the lightbulb. Finally, turn on the locomotive so that the bulb lights and take a reading.

You can complete this project by yourself if you have a locomotive and power pack and have some simple tools. ▶ STEP

Step 1: Disconnect one of the lightbulb's wires from the locomotive. This engine uses that are easy connectors, making the job easy.

Step 2: Set the multimeter to read milliamps. You can purchase an inexpensive multimeter from most hardware stores or home centers.

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The interior of this high-capacity coach is fitted out as an office, complete with desks, chairs, and a conference table. The windows are tinted to reduce glare, and the walls are lined with bookshelves. The car is designed for use by engineers and technicians who need to work while traveling. The exterior is painted in a dark green livery with gold lettering.

New HMRAIEETA Standards

An updated version of S-511.1, Physical Layer for NMRA/IEEE has been passed for review via the NMRA website to the Standards & RP section for additional comment. S-9.5.2, Encoder Layer, has also been passed for review. This Standard describes the features for the message packet.

We plan to submit these two standards to the NMRA for approval at the next meeting, June 2011 in Sacramento, California.

Please provide your comments to Dick Vos, 54308, Mowgli, MG Digit, or by email/snail mail as soon as possible.

Product Review
Athearn Genesis SD70MAC
HO Scale

by Gary Hamm

If you were to examine EMD's SD70 series to the usual million or more kilometers they would probably think of EMD's high-tech locomotive that was first produced in the early 1990s. It's a good starting point, but when you open the hoods on the SD70 series, a remarkable difference appears that shows an entirely other ancestry. The previous SD70 was followed by the SD70M, SD70I, SD70MAC, SD70ACe, SD70ACe-T4, SD70M-2, and the SD70M-2. The original SD70 featured the familiar "spartan" cab and DC traction motors. A larger "comfort" cab and a wide nose were introduced on the SD70M. The SD70I broke away the EMD's popular comfort cab by adding rubber gaskets to isolate the cab from the locomotive frame. This cab technically became known as the "WhisperCab" for obvious reasons. The next SD70 variant focused on the traction motors. The SD70MAC was essentially an SD70M equipped with AC traction motors rather than DC motors. While the AC motors were complex and more reliable, they required expensive warnings, which drove up the overall initial cost of the locomotive. The SD70MAC was phased out due to EPA regulations for road locomotives. Its replacement is the SD70ACe, which was in the Tier 3 EPA

Athearn Genesis's SD70MAC's number style follows prototype practice. Numbers are 4 digits for road #1-1 and 5 digits on the locomotive. Model has road #1-1 and is available in DCC ready.

regulations for road locomotives. Its replacement is the SD70ACe, which was in the Tier 3 EPA regulations. The SD70ACe-T4 is the Tier 4 version of the SD70ACe designed for the new EPA regulations. BNSF Railway and Amtrak are the primary customers for the SD70ACe-T4. The SD70M-2 is a Tier 3 version of the SD70M designed for the new EPA regulations. BNSF Railway and Amtrak are the primary customers for the SD70M-2.

Athearn has released as part of its Genesis line, HO versions of the SD70M, SD70MAC, and SD70ACe. An SD70M-2 is scheduled for release in July 2011. In N scale, Athearn offers an SD70M and SD70I. Our product review sample was an HO scale, DCC ready SD70ACe in the handsome Kansas City Southern paint scheme. Other roads available include: Pennsylvania, CSX, Union Pacific, Norfolk Southern, Montana Rail Link, UP Big 30 UP wedge, UP Missouri Pacific Heritage, and undecorated (no road/paint scheme). Sound-equipped DC/DCC versions are also available. The model's detailed with many separately-applied details, including a full cab interior with seated engineer figures. The cab roof is removable for two-man access. The chassis uses a powered

KANSAS CITY SOUTHERN

KCS

Above: The cab roof is held in place by two screws, one at each end. Remove them and lift off the roof to expose the headlight holder.

TABLE 1. Function overview and inspection summary

[illegible] (shown: DCC/DCX/PC mode programming Configuration)	
3-1 Couplers	Pass
3-2 Wheels	Pass
3-3 Gearbox	Pass
3-4 Motor	Pass
RECOMMENDED PRACTICES (not required for Certification)	
RP-9.1.1 Rail interface is electrical	Fail (1)
RP-9.4 Wheel contact	N/A

Notes:
1. [illegible]

All the applicable NMRA standards for the new DCC equipped 60700AC locomotive, which allowed NMRA Conformance Warrant 2014-1 to be issued. The MSRP for the Ashburn Division GE P40C is/was stated at $349.99 and with sound, DCC is $384.99.

[illegible]

Disclaimer: Lab-standard product evaluations [illegible] are not to be construed as an endorsement of the product tested, nor are results meant to rank one model against another in the product class we [illegible] among the [illegible]

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Trackside Photos

A two-truck Shay stops at a water tank for a refill near the waterfall that gives the town of Granite Falls, Wash., its name. The scene takes place on an On2½ module built by Bill Orr, a member of the Suncoast Model RR Club in Largo, Fla. The water tank was scratchbuilt by fellow club member Ray Feldt, and the waterfall and river were made by Jon Ashburn. [Lou Sassi photo]

Want to see your work in Trackside Photos?

Trackside Photos is an showcase for the work of Model Railroader readers. We encourage contributions. Send your images (original color slides or digital images) in magazine or letter or CD-ROM for Model Railroader, Trackside Photos, P.O. Box 1612, Waukesha, WI 53187-1612. Include caption information, such as a description of what's going on in the picture, the name, scale, era, and scale of the layout, and information about the railroad you're portraying. Be sure to include your name, address, and daytime telephone number. Unfortunately, we cannot return your photos. Or e-mail digital photos to mrmag@kalmbach.com.

Chicago & North Western No. 9000A leads the Dinkel-built 400 around a curve on Rhen Glander's 143-scale Compact Northern RR. Station at Elm Grove, Wis., plans to open the railroad for tours during the 2010 National Model Railroad Association convention in Milwaukee, Wis. Dave Frieder photo

More on our Web site

Dave Frieder's photos of Rhen Glander's 143-scale Compact Northern RR appear in our free downloadable computer wallpaper this month. Here's how: www.trains.com/wallpaper

Trackside Photos

Southern Pacific no. 2158 approaches a scratchbuilt plate girder bridge on Bill Young's G scale layout in Mount Shasta, Calif. The locomotive is from Aristo-Craft, and Bill built the trees with materials by Woodland Scenics. [redacted]

Charlie Funk of Pewaukee, Wis., combined his love of ships and trains to scratch-build this O scale model of the Great Lakes railroad ferry Spirit, depicting the approach and counterweighted apron at St. Ignace, Mich. Charlie says the 4-foot-long module took 2½ years to research and build. [redacted]

A Constellation descends a steep cliff in the Rockies on Anthony Richter's HO scale Denver & Rio Grande Western layout. Anthony, who lives in Spearfish, S.D., built the locomotive from a Bowser kit, made the roof molds for the cuts, and also took the photo.

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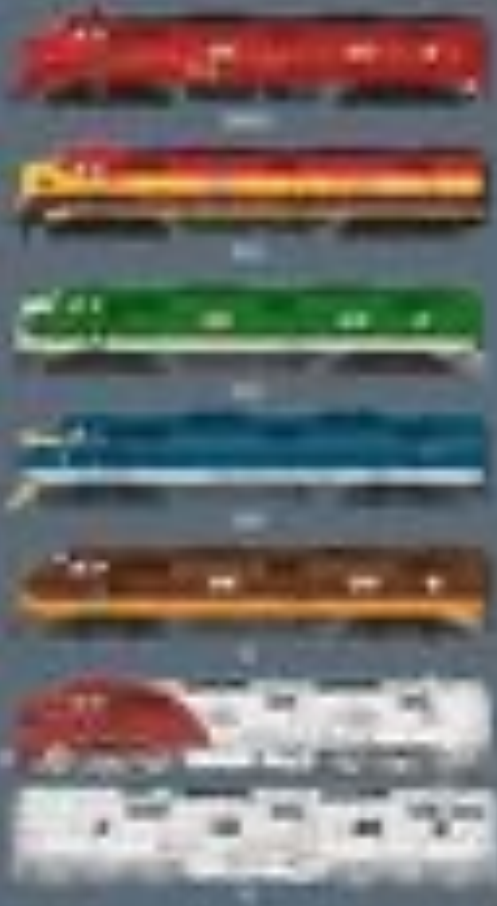

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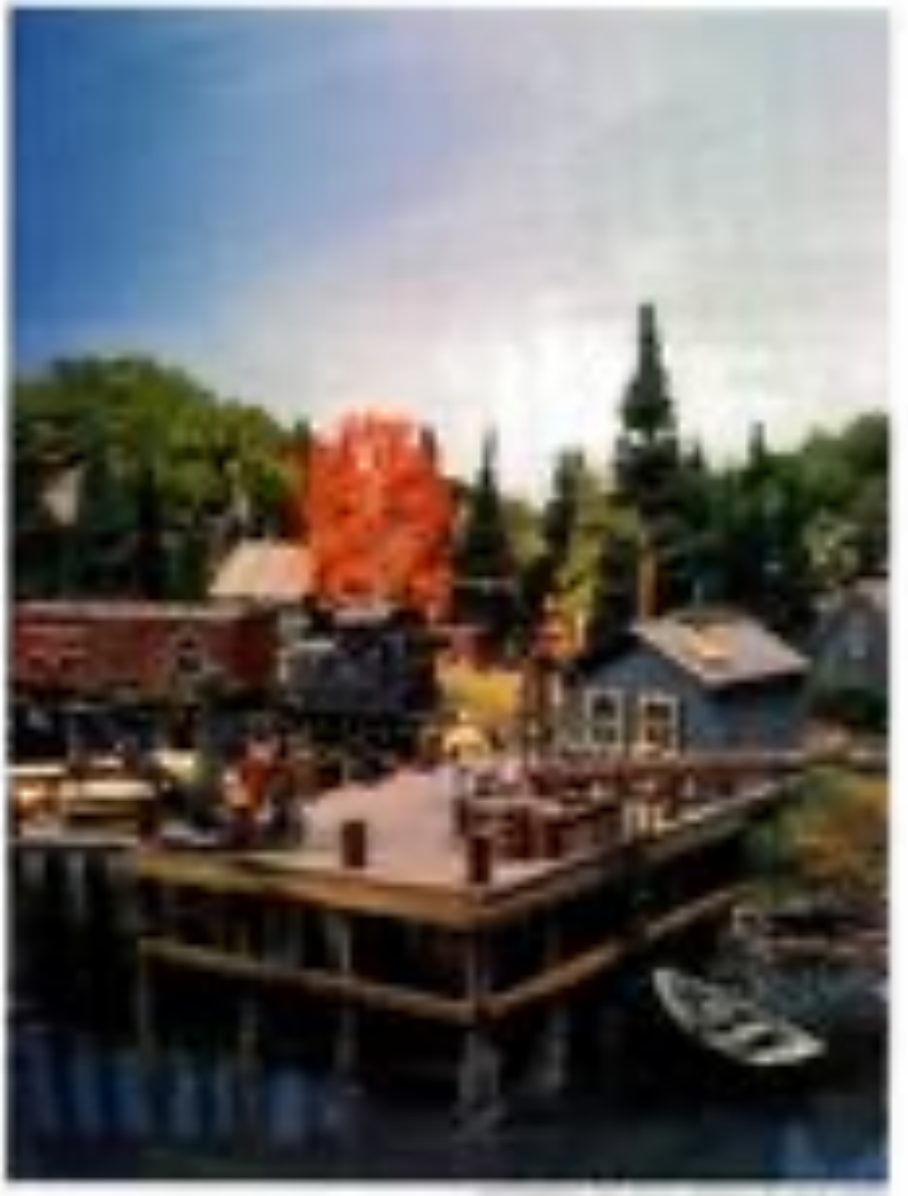

Done fishin'

The fleet is out and won't be back until the rainmakers' day is done. However, one fisherman, home early because of faulty equipment, warily contemplates another way of life as the little gasoline switcher works the scenery at Gull Island – the wife also furthering in the middle left of a fishing village. ✦

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